REPORT RESUMES

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ELEMENTARY SCHOOL BUILDINGS (KINDERGARTEN - GRADE 8).
EDUCATIONAL SPECIFICATIONS FOR THE PUBLIC SCHOOL BUILDINGS IN HAWAII, VOLUME 1.
HAWAII STATE DEPT. OF EDUCATION, HONOLULU

PUB DATE 59

EDRS PRICE MF-$0.75 HC-$5.36 132P.

DESCRIPTORS- *BUILDING DESIGN, *CURRICULUM, *ELEMENTARY SCHOOLS, *STANDARDS, EQUIPMENT, FURNITURE, OUTDOOR EDUCATION, SCHOOL LOCATION, SCHOOL SIZE, SCHOOL SPACE.

A FACT-FINDING PROCESS TO ANALYZE, DESCRIBE, AND INTERPRET THE SCHOOL PROGRAM, RESULTED IN A SET OF SPECIFICATIONS TO BE USED AS THE BASIS FOR MAKING ARCHITECTURAL DECISIONS. MAJOR TOPICS ARE--(1) EDUCATIONAL SPECIFICATIONS, (2) FURNITURE AND EQUIPMENT, EDUCATIONAL EQUIPMENT AND SUPPLIES, AND (3) BUILDING STANDARDS. THE SCHOOL IS DISCUSSED IN TERMS OF (1) BUILDING SIZE, (2) BUILDING COMPONENTS, AND (3) SITE RELATIONSHIPS. ALSO INCLUDED ARE PROGRAM REQUIREMENTS, EDUCATIONAL OUTCOMES, AND DISCERNABLE TRENDS. SPECIFIC DESIGN REQUIREMENTS ARE GIVEN FOR (1) AREAS OF INSTRUCTION, (2) ADMINISTRATION, AND (3) OTHER BUILDING FACILITIES. DESCRIPTIONS AND QUANTITY SPECIFICATIONS ARE MENTIONED FOR SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT IN CLASSROOMS AND OTHER BUILDING FACILITIES, AND OUTDOOR PLAY AREAS. EDUCATIONAL SUPPLY AND EQUIPMENT REQUIREMENTS ARE LISTED BY GRADE LEVEL FOR CLASSROOMS AND SPECIFIC EDUCATIONAL ACTIVITIES. SPECIFIED ITEMS OF FURNITURE AND EQUIPMENT ARE DESCRIBED. BUILDING STANDARDS ARE SHOWN FOR SCHOOL SITES, SCHOOL BUILDINGS, AND OUTDOOR PLAY AREAS. (MM)

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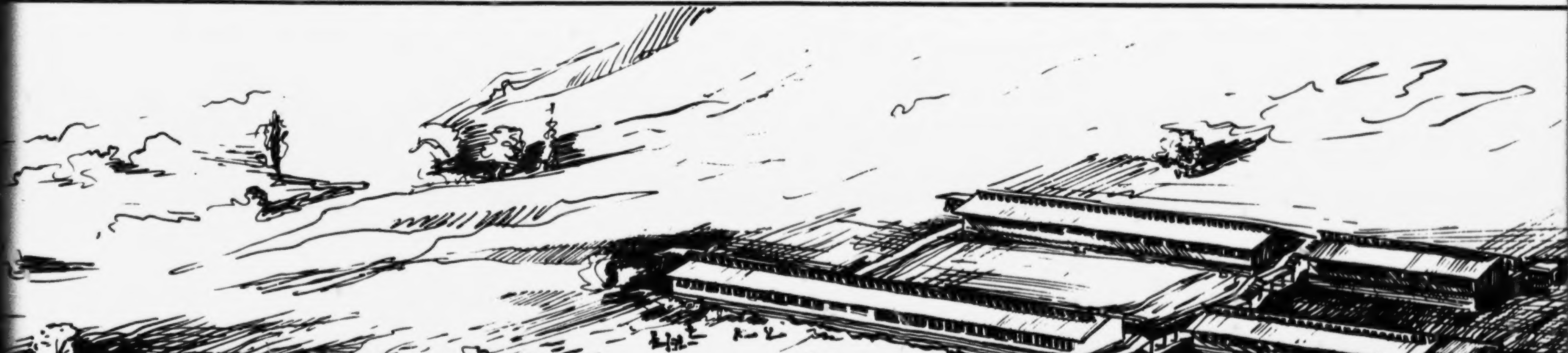
Educational Specifications

For
The PUBLIC SCHOOL BUILDINGS in HAWAII

Volume I
ELEMENTARY SCHOOL BUILDINGS



EF 000617

Department of Public Instruction
Hawaii

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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EDUCATIONAL SPECIFICATIONS

For

The PUBLIC SCHOOL BUILDINGS in HAWAII

Volume 1

ELEMENTARY SCHOOL BUILDINGS

(Kindergarten - Grade 8)

A Publication of the Department of Public Instruction

Walton M. Gordon
Superintendent of Public Instruction

Honolulu, Hawaii
1959

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FOREWORD

Following World War II, it soon became obvious to all concerned with education in the Territory that a school housing shortage was inevitable, that steps would have to be taken to accommodate more children and to provide adequate school plant facilities.

For many years studies, research and compilation of materials pertinent to improved school buildings, furnishings and adequate equipment in the schools of the Territory had been going on in the district and territorial offices of the Department of Public Instruction and a voluminous amount of data had been gathered. Many local architects and interested community persons had made valuable contributions to this material. The Odell Survey, authorized by the Department of Public Instruction and the Governor, gave impetus to curriculum improvement and better financing and planning for schools.

The physical plant program of this Survey under the direction of Dr. James MacConnell was primarily concerned with the Department's role in planning for school facilities. A Steering Committee within the Department of Public Instruction with the assistance of Dr. MacConnell and aided by many Department personnel prepared detailed "Educational Specifications." This body of material is the result of a fact finding process to analyze, describe and interpret the school program so that the specifications become the basis for making decisions by architects.

The results of this have been compiled into the two following volumes:

EDUCATIONAL SPECIFICATIONS for SCHOOL BUILDING in HAWAII
Volume I Elementary School Buildings

EDUCATIONAL SPECIFICATIONS for SCHOOL BUILDINGS in HAWAII
Volume II Secondary School Buildings

A carefully worded Policy Statement is an important part of this publication. It is imperative that everyone concerned with school planning understands these policies as they relate to the educational specifications. This approach is recommended to insure maximum benefit from the use of this publication. Through the effective use of these two volumes, better schools, both educationally and economically sound will result for Hawaii.

WALTON M. GORDON
SUPERINTENDENT
DEPARTMENT OF PUBLIC INSTRUCTION

INTRODUCTION

EDUCATIONAL SPECIFICATIONS for SCHOOL BUILDINGS in HAWAII, Volume I - Elementary Schools and Volume II - Secondary Schools, is a guide book for architects, district and territorial personnel, principals, P.T.A. and others interested in school planning. This building guide indicates the relationship of the physical plant to the philosophy and curriculum for schools in our dynamic, changing community.

All concerned with school building planning will use the statement of policy embodied in this publication as a means of developing the best possible school building program. It is recognized that to implement fully these policies, other phases of the school program such as more adequate staffing of small schools and a better adjusted salary schedule for principals will need to be considered.

As this introduction is being written the longest space missile ever to be launched has been put into orbit. New techniques of teaching languages are being developed and the results of new research in the teaching of reading are being reported. These changes could and no doubt will result in some need for improvement in the present teaching curriculum which in turn will require different equipment and probably different space requirements. The volumes are loose-leafed and organized to allow for revisions when necessary.

The Educational Specifications include recommendations for the selection of desirable school sites, optimum sizes of schools at different levels and school building area standards. It also contains a detailed listing of furniture, equipment and educational supplies to carry on an adequate school program. It is published in two volumes:

Volume I Elementary School Buildings

Part I	Educational Specifications
Part II	Furniture and Equipment: Educational Equipment & Supplies
Part III	Building Standards

Volume II Secondary School Buildings

Part I	Program Requirements
Part II	Educational Specifications
Part III	Furniture and Equipment
Part IV	Building Standards

It is strongly recommended that steps be taken to orient school personnel in the proper use of new school facilities and that evaluation of the facilities as well as the Educational Specifications be a continuous process.

HENRY S. NAKATA
DEPUTY SUPERINTENDENT
SCHOOL BUILDING SERVICES

POLICY

The general purpose of the Public Schools in Hawaii is to provide for every individual a sound educational program in skills, knowledge, character development, and an understanding of basic American culture.

To achieve this program,

The ELEMENTARY SCHOOL buildings should:

Be planned for enrollments of 350 to 800 pupils

Be located in residential neighborhoods away from hazards to character development and physical health.

Be designed to bring children, parents, and school personnel together in a friendly cooperative atmosphere.

Have the educational and enabling services necessary to promote confidence in the school program and enable teachers to fulfill their particular function. This means adequate library, health and counseling services, hot lunches, and custodial service.

Give consideration to the possibilities for adult education classes and community use of building facilities.

The SECONDARY SCHOOL buildings should:

Be planned for enrollments as follows:

Intermediate School:	Not less than 500 pupils Not more than 1500 pupils
High School:	Not less than 500 Not more than 2000
Combination Inter. & High Schools:	Not less than 600 Not more than 1200

Note: Combination secondary schools intended to provide adequate facilities for both intermediate and high school levels will not be planned in the future. However, during a transitional period, it may be necessary to house both levels in the same plant. The school building which is constructed will be designed primarily either as an intermediate school or as a high school.

Be planned so that priority is given to the construction of classrooms and other facilities necessary to provide for the required subjects and minimum electives.

Be planned so that the number of regular and special classrooms needed for each new school is based on the current pupil-teacher ratio and upon the required and electives courses offered.

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PART I

ELEMENTARY SCHOOL BUILDING FACILITIES

PART I

THE ELEMENTARY SCHOOL

Those responsible for elementary education today seek not only the development of competence in the skills of reading, writing, arithmetic, speaking and learning but also the development of individual interests and social effectiveness in working and playing with others. The mental health of the individual as a basis for sound moral development is receiving increased attention.

There has been growing recognition that it is difficult and probably impossible in larger schools to maintain the quality of human relationships which is necessary for development of good character. It has been found that the quality of the relation between parents and their children is more important in preventing juvenile delinquency than the economic level of the home or the neighborhood in which the home is located. So, too, it is quite probable that relations within schools are a major factor in the quality of the product. Size of schools appears to be one important element in good relations. Therefore it is recommended that elementary schools be planned for enrollments of from 350 to 800 pupils.

Location

Modern trends indicate that elementary school buildings should be placed in residential neighborhoods and not on main highways or in proximity to hazards to character development and physical health.

School Size

As related to Pupil Learning: Observation of schools in operation suggests that larger units almost inevitably have many restrictions and limitations on pupil learning. The larger the building the more rigid the schedule tends to be, for the use of special facilities. As rigid scheduling becomes necessary, it is impossible to plan with individuals and class groups for special out-of-class activities, except in accord with a pre-arranged schedule. This is a serious limitation. There is not only a problem of when facilities can be used, but for how long. In other words there is usually a strict rationing of special facilities, including play areas. Inflexibility is the result.

Elementary schools of more than 20 classroom units tend to have a stifling effect upon the imaginativeness of teachers and children. The necessity for extensive arrangements and "channels" places barriers between good ideas and action on these ideas. Such large buildings make it entirely too difficult to strike while the iron is hot. Class activities in such buildings tend to be reduced to a monotonous routine. Much that is mediocre or poor about urban elementary school work can be explained through sheer size.

The larger the building the more there tends to be time spent standing in line to get into school, into the cafeteria, into classrooms, to use toilets, drinking fountaines and so on. This condition results from the need for more rigid control in larger buildings and the impracticability of permitting children to be on their own. This again limits independence of action and the development of self-direction.

In larger buildings there seems to be more evidence of tension and apprehension on the part of children. There are more fights on the playgrounds. Children do not know one another and teachers do not know children. Frequently, the attitude develops, "They can't boss me, they don't know me." The large school tends to be impersonal.

The larger the building the more need there is for regulations controlling traffic, and systems of passes to admit children to various rooms. A free and easy, flexible arrangement where children can enter the building before school opens, where they can go from room to room to confer with teachers and use special resources either as individuals or as members of a small group appears highly important if there is to be good self-directed learning.

In larger buildings it is much more difficult, if not impossible, to build a feeling of unity, good morale and belongingness. While a certain school spirit and pride can sometimes be developed in large buildings, it is almost impossible to get the feeling of responsibility and the feeling of belongingness on the part of most, if not all, of the youngsters. Similarly, if there is to be a good school council of reasonable size, yet directly representative of groups in the school, a small unit is necessary.

A building of 12 to 15 classrooms seems to be about the maximum size unit which can be operated so as to preserve the small building advantages as far as direct pupil learning is concerned.

As related to Parent Participation: The necessity of full parent participation if there is to be good education is increasingly recognized. Not only should buildings be designed for community use of the facilities, but also lay citizens and parents should be involved in planning and in program development. While the individual classroom is probably the best point of contact with parents, it is helpful if the total group can be kept small enough so that some things can be done as a total group and some unity and morale can be developed. It seems important to have the teachers and the principal get to know a significant proportion of the parents.

Observation of schools would suggest that when there are over 500 to 800 parents, it is difficult, if not impossible, for the school staff to develop a desirable kind of relationship with them.

As related to Staff Planning: Increasingly it is coming to be recognized that continuous cooperative effort on the part of the total staff group is essential of a school is to have the unity and tone which will make it an important influence in the lives of children. As schools become large, it is impossible for the faculty to work as a unit and to keep in touch with individual programs and plans. This frequently leads to inconsistency in points of view and method among teachers. Children then may become bewildered as they pass from one teacher to another because of the profound differences among them. The only way to prevent such confusion is to maintain close acquaintance and mutual confidence among the staff. This is difficult if not impossible as a faculty group exceeds 15 to 20.

There is also a limit as to the number of staff members that a principal can know intimately and work with effectively. If the principal is to guide the planning of teachers and parents, facilitate coordination among various aspects of school programs, maintain appropriate relations with the district office, as well as with the junior high school, which the elementary school may feed, and carry those other responsibilities necessary for maintaining a harmonious working group, the staff should probably not exceed 15. Certainly, additional staff help can be provided for the principal, but this does not remove the problem of maintaining staff relations which will result in the development of a faculty which is an effective working team.

As related to Type of Building: The trend is to house all elementary school pupils on the gound floor. Therefore, elementary schools should be of the one-story type. Until such time as long-range planning makes adequate sites available, some two-story buildings may need to be built as an emergency measure. In this case the kindergarten, first, second, and third grade pupils should be housed on the ground floor.

Justification for housing elementary schools pupils in one-story type buildings are as follows:

> Outdoor areas immediately outside of classrooms are desirable for they enlarge the scope of the classroom.
>
> Elementary schools are integrating the physically handicapped children into the regular elementary school program.
>
> We believe that congested and general traffic noises are to a large degree eliminated if schools are of the one-story type.

Administration Building: The administration building should be so located as to be readily accessible to the public. It should be easily accessible to all areas of the plant. Parking areas for teachers and parents should be located as close to the administration buildings as possible. Roadways should be so arranged as to provide easy access to the administration building and cafeteria.

Classroom: Classroom wings or areas should be so arranged as to place the primary classrooms close to the cafeteria. Where buildings are of two stories, grades 1, 2, and 3 classrooms should be housed on the first floor. Passageways should be planned in such a way as to provide easy flow of movement to facilitate delivery and pick-up of children.

Kindergarten: The kindergarten should be a single-story building isolated from the rest of the plant, both as to its building and play area, but should be readily accessible to other parts of the plant, including administration offices, cafeteria, the multi-purpose areas, and with direct access to the road to facilitate delivery and pick-up of children.

Library: The library should be located in a quiet section of the campus, away from the large play areas and easily accessible to all classrooms.

Multi-purpose Room: The multi-purpose room should be convenient to classrooms. The entrances and exits, as well as the service facilities, should be accessible. The multi-purpose room should be so located that disturbing noises from adjacent activities do not interfere with its activities. It is desirable that student traffic between this area and the rest of the school be direct. Doors must be planned so that emerging groups and entering groups can be accommodated at the same time.

Cafeteria: Care should be taken in placing the cafeteria in such a way as to keep the prevailing winds from carrying odors from the cafeteria into the classrooms. It should be easily accessible not only to the various areas of the school but also to the general public. The kitchen area should be so placed as to provide easy access for deliveries.

Toilet Facilities: Toilet facilities should be placed as close as possible to the classrooms to be served. Individual toilets should be provided for kindergarten and first grade classrooms, with group toilets for all other elementary grades. One group toilet for not more than six classrooms for grades 2-6.

Playground Areas: There should be three (3) play areas for the elementary school. (Kindergarten; grades 1, 2, & 3; grades 4, 5, & 6). See Part III, Pages 119-120. These play areas should be located adjacent to the buildings each group and adequately protected from traffic.

Faculty Room: There should be a faculty room conveniently located for the faculty of the school. In addition, there should be sub-stations in each classroom wing. These sub-stations should be separate and apart from those planned for pupils. One sub-station for every six classrooms would be ideal.

Teachers' Work Room: One teachers' work room should be provided for each school. These work rooms should be placed close by general storage rooms for educational supplies.

Custodian's Storage and Toilet: Two types of storage areas should be provided for the custodian's use. One of these to be used for storing supplies such as toilet paper, chalk, mop heads, etc., and the other for storing work equipment such as wheelbarrows, step ladders, sprinklers, etc. There should be at least one of each type of room. One toilet should be provided. There should also be provided mop racks, in or close by each classroom wing for the storing and drying of mops used by the pupils.

General Storage: Two types of general storage rooms should be provided. One of these should be for storage of educational supplies and equipment (preferably in administration building), and one for the storage of such articles as costumes and dramatic properties.

Incinerator: Wherever possible, an incinerator should be provided for each school. The incinerator should be well screened and so located as to assure that smoke will not be carried over the classrooms by prevailing winds.

Conclusions As To Size Of Elementary Schools

The above-mentioned factors of special facilities for pupil learning, parent participation and staff planning do not give a specific hard-and-fast answer as to the desirable size of elementary school units. They do suggest that there is much logic and experience in favor of elementary schools of 350 children. This might include 2 kindergartens and 2 groups in each of the first six grades. This would result in a staff of 14 teachers per building, assuming no special teachers are provided. There would be a parent group of approximately 650 in that some parents would have more than one child in school. A unit of this size can operate with a minimum of the handicaps which a larger unit would face, and make substantial use of the range of facilities which a modern school should offer. In densely populated areas, it may be necessary to have schools larger than has been suggested.

It should be feasible however, to repeat for each group of 350 children special facilities such as: multi-purpose rooms, faculty rooms, teachers' workrooms and storage rooms, so that teachers and pupils may have some of the advantages of a flexible personalized environment.

School Site

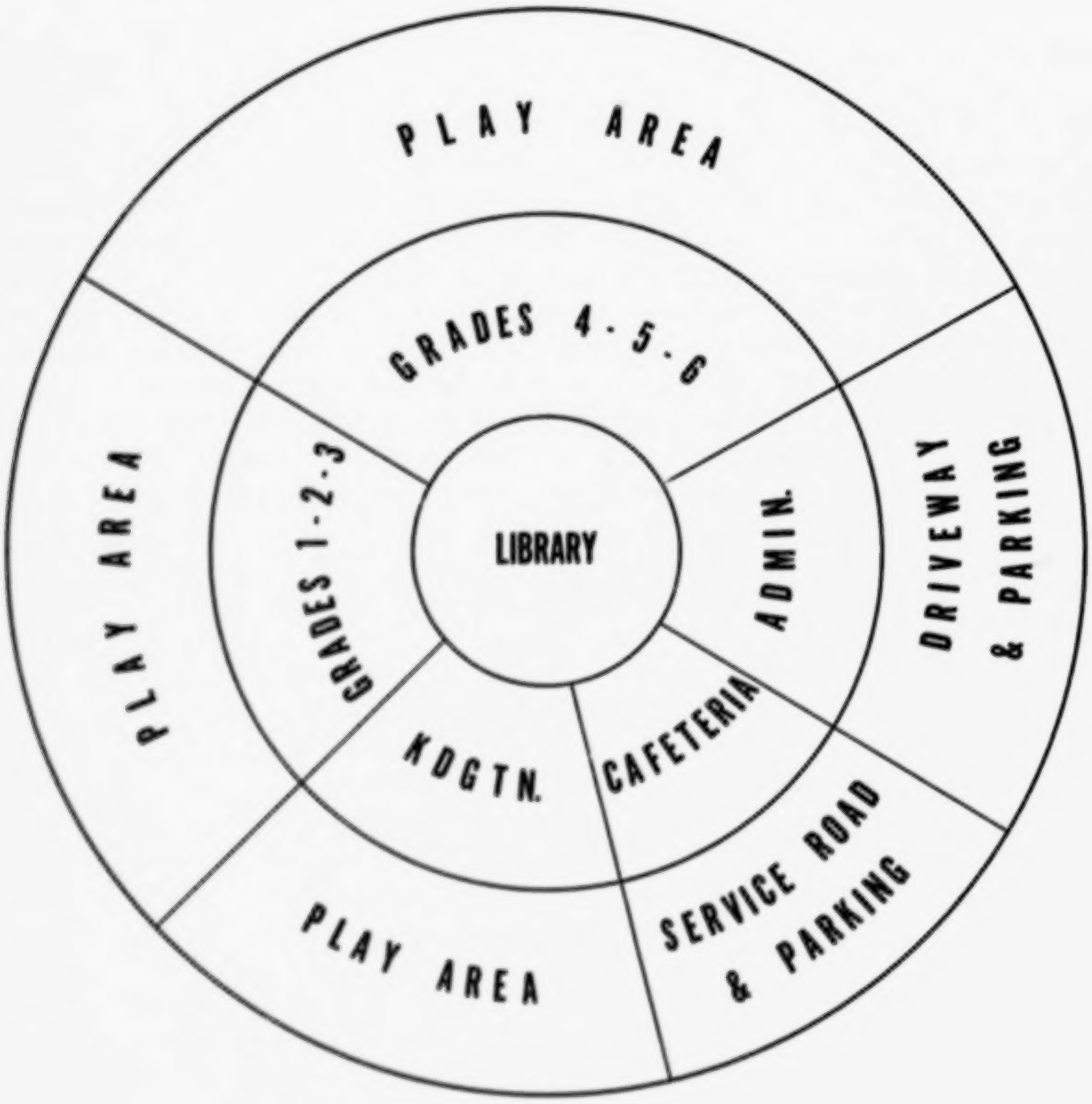
The acreage of allotted land, location, contour of land, local weather conditions and local use of school plant will all have a very important bearing upon the architectural structure of the proposed school buildings.

Because the usable land area allotted for a proposed secondary school is of such importance in caring for present educational needs as well as future development, required size of school sites is given in Part III, Elementary School Standards, Page 115.

Roadways, walks, parking areas, play areas and the orientation of buildings are important factors related to school sites. Assuming that the school site is easily accessible from roads or streets with adequate sidewalks or safety lanes for pupils walking to and from school, careful provision must be made for driveways, approaches, parking areas and walks within the school site. Safety, traffic control, convenience and accessibility need to be taken into consideration in the planning of these. Buildings and play areas need to be oriented in such a way as to minimize noise as well as time and distance in passing from one area to another. Planning should take into consideration proximity and accessibility to areas of related activities.

Following is a chart illustrating possible orientation and relationships of school facilities within a selected site.

SITE PLANNING


PLAY AREA
GRADES 4 - 5 - 6
PLAY AREA
GRADES 1 - 2 - 3
LIBRARY
ADMIN.
DRIVEWAY & PARKING
KDGTN.
CAFETERIA
PLAY AREA
SERVICE ROAD & PARKING

ELEMENTARY

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ELEMENTARY SCHOOL PROGRAM

Citizens, school people and architects have been working to plan schools which will be functional in terms of what we know about the needs of children as indicated by their growth patterns, mental and emotional characteristics as well as what society expects of its children. Modern education must adapt its program to the wide differences of ability, needs and interests of children and youth it serves. In recent years science and research have given us many facts about how children grow and learn which must be considered when a school is planned as indicated by the following principles:

Education content and method are changing due to research and world change.

Therefore: A good school is designed so it is flexible and easy to adapt to new methods, content or age served.

In the elementary school lessons are taught in broad integrated units that cover many subjects; i.e., a unit may include health, math, science, geography, reading, writing, spelling, history, music, painting.

Therefore: A good school has large amounts of varied and flexible space.

The classroom atmosphere is friendly, informal and orderly, It is cooperative and consistent with ethical and spiritual values we wish to teach.

Therefore: A good school is functionally beautiful. It provides classrooms protected from noise inside and outside. Seating is flexible.

Learning takes place in a variety of ways. It reaches out into the community and outdoors.

Therefore: A good school has sound integration of classroom space with outdoors.

Good education integrates and plans its program with parents, community leaders and social agencies.

Therefore: A good school is small enough that the principal and teachers may know most of the parents. It provides space for cooperative planning with the people of the community it serves.

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EDUCATIONAL OUTCOMES

In elementary schools fundamental learnings include those skills and understandings necessary for more effective living in a dynamic society, and those needed as a foundation for further learning. The program involves a broad range of skills, understandings, and attitudes.

Elementary classrooms need space for both individual and group experiences. These experiences include:

Mastering the basic sckills and fundamental content necessary for intelligent participation in a democratic society.

Gaining sound habits of objective thinking, and an open and inquiring mind.

Gaining confidence, self control, initiative, and respect for all that is worthy of respect.

Learning to become responsible and cooperative members of groups, school, family, and community.
Developing optimum health and physical well-being.

Developing creativeness and an appreciation of the creativeness of others.

DISCERNIBLE TRENDS

With the increasing growth of school-age population and as the content of the curriculum and teaching methods change, there is a need for a corresponding change in the physical set-up of a classroom. From a rigid assign-study-recite pattern of teaching, we are moving into a program of education that emphasizes active planning by pupils, group work on projects, individual research, and more active participation in the learning process.

Integrating of subjects into broad areas of experiences taught through a functional approach.

Providing instructional environment to meet individual needs and interests within group situations.

Pupils planning with the teacher.

Using committee organization for study and project work.

Involving parents in the instructional planning, particularly through parent-teacher conferences.

Evaluating school programs through research, testing, and group analysis.

Providing public education for children under five years of age.

Including science in the elementary curriculum.

Reducing size of elementary schools and classroom groups.

Increasing use of first-hand experiences in instruction.

Increasing use of illustrative materials, projection materials, radio and TV.

Incorporating instruction of the gifted and handicapped within the regular elementary school program.

Organizing ungraded primary units.

Integrating of classroom space with outside.

AREAS OF INSTRUCTION

ARITHMETIC

Educational Outcomes

The general purposes for including mathematics in the educational program are:

To help pupils acquire a knowledge and understanding of the science of the number system.

To help pupils develop skills in the art of computation.

To help pupils develop an understanding and use of the practical applications of number in modern life.

Discernible Trends

Major trends in the field of mathematics instruction have been:

Greater emphasis upon learning mathematical concepts.

The use of laboratory techniques to provide opportunities for experimentation and discovery with concrete and semi-concrete materials.

Activities

Some of the activities that pupils will participate in are:

Handling, counting, measuring, calculating, problem solving.

Using actual objects to discover or demonstrate number relationships.

Using flannelgraphs and charts.

Constructing models and figures.

Participating in discussions and dramatic activities.

Using reading materials.

Playing number games.

Engaging in drill activities.

Using measuring instruments.

Planning and going on field trips.

Orientation and Relationships

Internal Traffic

The central area of the classroom should be free from fixed furniture and equipment so that children can move around easily and different groupings can be made easily.

Furniture and Equipment

See Part II, Pages 55-58

Movable display table with storage to facilitate demonstrations should be provided. A minimum of 16 linear feet each of tackboard and chalkboard should be available. A workbench should be provided to provide constructing space and facilitate making charts and posters.

Utilities

Adequate electrical outlets should be provided. A sink and water outlet should be available.

Storage

Sufficient storage should be provided for concrete materials (sticks, bean bags, charts, abacus, counters, models, measuring instruments, etc.) In the 7th and 8th grades, provisions should be made to store constructing materials, models, geometric figures, charts, measuring instruments, etc.

ART

Educational Outcomes

To develop creative power thereby satisfying spiritual and esthetic growth.

To gain security, satisfaction and pleasure through self-expression in art media.

To develop critical thinking at each stage of the child's development by facing problems, solving and evaluating them.

To express visually individual thoughts, feelings and ideas.

To observe, understand and appreciate design in nature and art in everyday living.

To manipulate and explore, individually and in groups in a wide variety of art media and tools thereby developing imagination and coordination.

To develop socially by engaging in group projects.

To recognize and appreciate the work of ancient as well as modern artists of all cultures.

To develop skills for occupying one's spare time enjoyably and profitably.

To develop creative power thereby satisfying spiritual and esthetic growth.

Discernible Trends

Greater use of audio-visual materials, including TV.

More emphasis on design and imagination in solving problems in all art activities.

More stimulation and guidance from teachers.

More experimenting with a wider variety of materials and tools.

More emphasis on arts and crafts as a leisure time activity.

Activities	Material	Architectural Implications
Drawing and painting, including wax crayon and colored chalk. Cutting and tearing and pasting. Stick, linoleum, woodblock and silk screen printing. Collage Textile printing, batik, tie and dye.	Work table Easels Painting stools Movable cart Work table Individual tables	Continuous slanting tackboard 4' x 12' for murals, wide rail at bottom which can serve as a base for temporary easels. Small display board 4' x 5' for a reproduction of painting. Pinning space 22'' high above blackboards and bulletin boards for large paintings and friezes.
Clay	Kiln (electric) at least 3 cubic feet capacity. Any type approved by the Building Service Dept. One (1) per school. Truck 20''x36'' on casters with shelves for transporting clay pieces. Containers for clay -- 5-gallon galvanized can.	Kiln room with shelves, table and sink with a clay trap, and electrical outlet for kiln. One sink with a clay trap in each classroom.
Woodwork and Carving	Work bench -- portable with rollers that lock.	
Weaving	Table looms 2-4 heddles.	Storage space for yarns and native materials.
Puppetry and marionettes	Portable folding stage, one for puppets and one for marionettes.	
Miscellaneous Crafts		Storage for scrap materials.

Note: For further details, See Part II, Pages 55-58

HEALTH AND SAFETY

Educational Outcomes

Health education in the elementary school is concerned with all varieties of experiences which help children develop desirable patterns of health behavior at home, at school and in the community. Its objective is to provide boys and girls with well-planned activities which assist in building strong, healthy minds and bodies, as well as sound knowledge, attitudes and habits for personal health and the application of these learnings in present day safety, first aid, and public health.

Discernible Trends

The emphasis of health education is toward developing in each individual understanding of his own mental and physical processes. The teaching of health has become less a separate subject with emphases on the physical and biological aspects of health. The trend is toward developing understandings about how the pupil functions as an individual and, through many types of learning experiences, is helped to attain his optimum physical, mental and social maturity.

Activities	Material, Architectural Implications
Developing health routines	Hand washing and toilet facilities, sinks, mirrors, cleaning materials.
Demonstrations	Space for role playing and dramatizing of health activities to develop desirable skills, attitudes, and first aid and safety techniques.
Experiments (closely related to science activities)	Space for the growing of plants.
	Space for the care of animals.
	Space for insect cages -- life cycle of insects.
	Provision for observing molds, bacteria and their effect on food.
Reading and listening	Space for books, pictures, charts, posters and phonograph records related to health.
Games	Space for storing quiet games for relaxation periods.
	Space to play anatomical games.

Activities	Material, Architectural Implications
Excursions	Visiting places with health and safety implitions: dairy, water supply -- space for planning, writing, discussing, drawing.
Participation in school and community health projects	Space for posters, bulletins, health records.

Orientation and Relationships

Internal Traffic

Furniture and Equipment

See Part II, Pages 55 -58

LANGUAGE ARTS

Educational Outcomes

To develop ability to listen and observe with purpose, understanding, discrimination, and appreciation.

To enlarge vocabulary and refine concepts and meaning of words.

To clarify experiences, thoughts, and emotions; to develop ability to use language in thinking and solving everyday problems.

To develop desire and ability to speak correctly and effectively.

To develop ability to use writing, reading and speaking in meeting personal and social needs.

To achieve satisfaction and enjoyment from worthwhile listening, speaking, reading and writing experiences.

To develop skills needed for effective communication.

To develop basic reading skills.

To develop ability to understand and evaluate reading material suitable to the level.

To stimulate interest in reading worthwhile literature and the habit of reading as a leisure-time-activity.

Discernible Trends

There is more emphasis on working with small groups and committees which involves rearranging furniture for these types of activities work.

There is increased emphasis on research both in the language arts and in social studies, entailing the use of many books within the classroom.

There is also a trend toward using supplementary texts, and toward greater amount of reading from many books, rather than adhering strictly to "single text."

There is more emphasis on class speaking and listening activities such as informal speaking, announcements, panels, committee reports and small group discussions.

Another area in which there has been considerable change is in the use of audio-visual equipment: for example, tape recorders, high fidelity records, filmstrips and colored sound films.

Still another trend that is noticeable in the elementary school is the increased amount of dramatic activity which may take the form of creative drama, such as plays, puppet plays, flannelboard activities, socio-drama, choral speaking.

There is a tendency to use blocks for dramatic activities in the first grade.

Activities	Material	
Listening to, enjoying and reacting to examples of speech or of literature told or read by the teacher or others; or presented through the use of slides, films, recordings or radio. Planning and participating in choral speaking, story telling, role playing and dramatic activities.	Phonograph and recordings or stories, poems, speeches. Books of stories, poems & plays to use in reading to class. 1 low portable screen (room divider) 1 portable folding triple screen attached with puppet stage. (over-all size of stage and screen when folded about 6' high by 3' long.)	Free floor space (near chalkboard) sufficient for entire class to assemble at any time without shifting much furniture (9' x 18'). Facilities for use of projection material and phonograph. Large free floor space. Closet for storing puppet stage-screen, flannel board.

Engaging in special activities to improve listening and speaking skills; making recordings of speech to use in analyzing speech needs and in motivating and measuring improvement.	1 flannelboard, about 3' x 4'. 2 toy (or real) telephones, 1 mock (or real) microphone, games, calendar, objects to share with group. Large games and practice materials. Tape recorder	8' - 12' of shelving for books, puppets, near large free floor space. Adjustable shelves of various depths from 12" to 24". Legal-size file drawer for pictures, near large free floor area and near teacher's desk, if possible. Large free floor space and provision for small group and individual work.
Writing plans, records, summaries, letters. Recording on chalkboard, charts, or paper. Displaying chart holders, on bulletin board, or in a group book for the library corner.		Conveniently located electrical outlets. Storage space for games, tapes and practice materials. At least 16' of chalkboard.
	*Movable individual study tables or desks which can be easily placed together in discussion circles or tables when several groups work at the same time. *1 chart holder, chart paper 40" x 48", and 24" x 36". Material for making bindings of group or individual books; cardboard; colored construction paper; punch, stapler; string, paper fastner rings.	*Chart and map rail above blackboard, with 12 movable combination hooks and clips for displaying charts. Case or shelves for storing paper of different sizes. 4' - 8' tackboard for displaying group and individual compositions. Kindergarten 16' tackboard.

Activities	Material	Architectural Implications
*Partially independent or independent composing at chalkboard.	*Individual tables or desks for individual writing *Writing paper for each child (12'' x 18'' and 9'' x 12'') *Large pencils for each child in Grades 1-2; pens for each child in Grades 5 and 6.	Chalkboard 24' at least 16' running consecutively and no section less than 4'.
Group Reading. One group of 8-12 pupils at a time reading under direct guidance of teacher while 2 or 3 other groups work fairly independently at seats or in small groups.	Basal readers - one for each child.	Free floor space near at least 16' of chalkboard. Shelves near free floor space to store basal readers between reading periods - total about 8' of shelving.
Developing background of experiences, concepts and vocabulary for reading through providing firsthand or other audio-visual experiences.	Many single copies of supplementary readers, tradebooks reference books, dictionaries. Table about 3' x 4' or circular table about 4' - 5' in diameter. 6-10 chairs. Individual tables or desks.	Classroom library corner or center with bookshelves somewhat protected from the more active noisy activities. Floor space 9' x 9'; shelving 12' in movable units. Display space for open and enclosed books.
Evaluating progress. Group discussing and recording. Taking formal and informal tests.	Note: For further details, See Part II, Pages 55-58	

*Not applicable to Kindergarten

MUSIC

Educational Outcomes

The Elementary School Music Program shall provided optimum conditions for musical growth to:

Develop sensitivity and responsiveness to many kinds of music.

Cultivate creative musicianship and sound musical discrimination.

Achieve maximum music potential.

Develop increasing awareness of music as a dynamic cultural factor in life both during school years and as an adult.

Discernible Trends

In an effort to reach all the students in the elementary schools and help them to discover how they can best enjoy music, there is a definite trend toward broadening and enriching the music program at each grade level and toward providing for sequential development. Specialized education on instruments, such as piano and violin, is being considered more and more as a part of the general elementary school music program. These trends have definite implications in the planning of the music space and the equipment and supplies necessary to carry them out.

Activities	Material	Architectural Implications
Singing	Movable classroom furniture.	Large free floor space for entire class to gather.
Rote Singing	Song materials. 1 set basal songbooks per room, Grades 3-6	Multi-purpose room with piano, small stage and large floor space.
Reading music		
Community singing (more than one class)	Staff liner for lining chalkboard	Chalkboard.
Part singing		Sound control to protect other classes.
		Sound proofing, proper ventilation, good acoustics.

Listening: radio, television, records.	Record player Radio Records Television	Corner or wall space for piano as near door as possible to facilitate moving piano in and out of classroom; ramps instead of steps.
Listening to live performances.		Large amount of storage for sets of music and orchestra instruments.
Rhythmic Activities	Rhythm band instruments, Grades 1, 2, and 3.	Classroom storage space near free floor space for sets of music books, staff liner.
Free rhythmic activities: swaying, running, jumping, galloping, marching.		
Organized rhythmic activities as folk dancing, singing, games. Folk dancing includes square dancing and hula dancing; social dancing.		Electric outlet for player near large free floor space. Small storage in each classroom for about 1 dozen 12" and 14" and 45 RPM records.
Making up words and melodies. Developing dramatic situations involving music. Designing and making simple instruments. Correlation of painting and music.		
Instrument playing	Guitars Ukuleles	Cabinet for storing instruments.
Playing rhythmic instruments	Piano keyboard charts Rhythm instruments	Adjoining lanai and yard area as well as music room for rhythmic activities requiring very large free space.
Playing melody instruments	Melody instruments: tonette or preband and band flutophone, song flute, recorder, resonator bells, xylophones	

Playing ukuleles or guitars		Electric outlet on lanai for record player.
Playing band and orchestra instruments	Resonator bells or xylophone - 1 for each room. Piano which can be moved easily from room to room.	
Playing the piano		

Furniture and Equipment

Piano -- Grand or small upright on heavy caster base (1 per school, plus 1 per each 300 additional pupils)

Phonograph -- 4-speed. Variable speed control; manually operated. See Music Guide for description. (1 per classroom -- K to Grade 3, 1 per 2 classrooms, Grades 4 to 8.)

Radio -- portable (1 per classroom, grades 4 to 6)
See Part II, Pages 55-58

Utilities

In the planning phases of school room construction, consideration should be given to electric wiring that will include a minimum of one double 110 volt electric outlet on each wall for record players, radios, televisions. Wire facilities should be made available for radio and television antenna. One wall to be specially wired to accommodate sound projector.

Special Requirements

Each school plant should have outside and inside space for big rhythmic activities as well as a room in which several classes may join in community singing. A small auditorium or multi-purpose classroom may fulfill this requirement.

PHYSICAL EDUCATION

Educational Outcomes

Physical fitness, optimum growth and development, physical skills, knowledge, appreciations, desirable social-emotional qualities.

Physical Education is education in and through participation in physical activities

Under the guidance of the classroom teacher.

In an environment which is protective and educationally conducive.

Its purpose is to gain DEVELOPMENT, LEADERSHIP and ADJUSTMENT:

According to the potential values of physical education activities.

According to the needs of the individual and society established by reference to optimal standards.

Discernible Trends

Increasing emphasis is being placed on:

Rythmical activities in all grades
Stunts and elementary gymnastics in all grades
Modified team games and sports in grades 4-8
Physical conditioning activities and physical performance testing in grades 4-8
Intramural and extramural programs for physical recreation clubs in grades 4-8
Play days and sports days

Activities

Class Instruction

Guided Play
Semi-active and active
  Games & Relays
Stunts
Simple Team Games
Rhythmical Activities
Quiet & Classroom Games

Recreational Periods (recess, before and after school)

Mass participation under general supervision in apparatus play, ball games, running games, hopscotch, rope jumping, etc.

During inclement weather activity will be combined to hallways and covered passageways in such activities as hopscotch, rope jumping, target toss, shuffleboard, etc.

Intramural and extramural program. Organized competition for teams within the school in team sports, such as touch football, basketball, softball, volleyball, track and field, and individual sports, such as table tennis, horseshoes, shuffle board, checkers, etc.

Play days and invitational games: The school is host to a group from another school, or groups from several schools.

Building requirements: Multipurpose room for dancing, semi-active group games, stunts, tumbling and combatives, and for use during inclement weather.

Outdoor facilities required to accommodate the program of activities are given in Part III, Standards, page

Orientation and Relationships

General Area Relationships

Separate play areas should be provided for

Kindergarten
Grades 1, 2, 3
Grades 4, 5, 6, 7, 8

All play areas should be located so they can be used with minimum disturbance to other classes in classroom sessions

Internal Traffic

Pattern One. For physical education instructional periods: movement in classroom groups (one classroom group or several classroom groups at the same time) originates from classrooms to outdoor play area or to multi-purpose room and back to classrooms.

Pattern Two. For recreational periods: movement from all classrooms at once or from multi-purpose room to outdoor play area or to available indoor areas and covered passageways during inclement weather and then to classrooms.

Furniture and Equipment

See Part II, Pages 82-84; 119-120

Utilities

Audio-visual

Storage

Storage within classrooms must be adequate for equipment in current use.

Additional central storage space is needed for outdoor equipment.

Special Requirements

Enrollment

800 pupils equal 3-4 class groups in each grade or 25 class groups.

Physical education class instruction load -- all class groups will be scheduled for the various play areas at various times throughout the school day, morning and afternoon. Adequate provisions for play areas for recreational period activity will meet the need for space for the class instructional program.

Recreational period load -- 288-300 pupils (peak load)

SCIENCE

Educational Outcomes

The elementary school science program should continually help children grow in understanding and appreciating their immediate environment; cultivate their ability to sense and solve problems encountered in their environment using reliable data; and develop special interests and hobbies.

Discernible Trends

Because of the great need for scientists and engineers, increasing emphasis is being placed on the science program of the elementary school. A possible trend may be in the direction of providing additional experiences for the superior students as they are identified. The special interests and projects of these students may be adequately handled in the self-contained classroom. However, a special room may be necessary for individual research, projects and help from teachers and community people.

Activities	Material, Architectural Implications
Simple Experiments; Pet Care; Observation of insects, birds, etc.,	Pictures, charts, specimens Garden tools: hoe, shovel, trowels, rake Aquarium, Terrarium Pens and cages for animals and insects Jars, corks, magnets, thermometer, rubber tubing Magnifying glass Science kit Collections: shells, seeds, rocks, etc. Hot plate Space (a science corner, or science table) for observation, display of interesting science

	materials to arouse curiosity, interest, observation and experimentation, and simple experimentation, and simple experiments, with easy access to books and running water.
	Space must be provided where child can conveniently handle materials and make simple experiments. Facilities must be provided for adequate care of small animals and insects. Space must be provided for storage of science materials, equipment, small garden tools, pet and insect cages, etc., when not in use. Storage space for science materials: approx. 3 cu. ft. Storage space for garden tools: approx. 5 cu. ft. Storage space for insect cages: approx. 3 cu. ft. Space must be provided for posting of pictures, charts, etc., near science corner or area. Outlets for hot plate.
Collecting and observing real objects	Exhibit space for at least aquarium, terrarium, and insect cage. Microscope, magnifying glass and compass; space and table or counter where these can be used by at least 4 students at a time.
	Large cages or pens for animals in plot of ground adjoining classroom.
Performing experiments, giving demonstrations, reproducing processes	Electric hot plate on acid and heat resistant table or shelf where it is always safe and ready for use; electric outlet nearby. Movable table for demonstrations (or movable case with counter above, storage below). Science kit of miscellaneous science equipment; and storage space for science equipment.
Growing plants and caring for animals	Box and pots for growing plants in the classroom. Plot of ground (preferably adjoining classroom) for growing plants and caring for larger pets.

Orientation and Relationships

The self-contained classroom should avoid the distracting problem of noise and traffic, should be convenient to the library in order to facilitate library research, and it should have access to a planned growing area (pond, plot to grow plants, hot-house) to accommodate natural science investigation and experimentation.

Internal Traffic

A major need of a self-contained classroom is a high degree of flexibility. The center of the room should be cleared of stationary equipment so that the children may move about in carrying through the many activities listed previously.

Furniture and Equipment

Table or work bench with storage for the tools.
Tools and supplies for the work bench - vises (metal and wooden), saws, hammers, screw drivers, pliers, clamps, plane, wire-cutter, tin snip, nails, screws, sheet metal, wires.
Discovery table for the science corner.
Glass covered display case.
Animal cage, 12'' x 20'' x 15'', one.
Aquarium, 6 to 8 gallons, one.
Hot plate, single burner, one.
Insect box, 12'' x 12'' x 10'', two.
Movable laboratory truck
See Part II, Pages 55-58

Special Furniture and Equipment for Grades 7 & 8 -- self-contained classroom.

Portable demonstration table (on rollers)
  Surface area -- about 20 sq. ft.
  Gas Outlets
  Drawers and cabinet with shelf space for bottled gas
  See Figure #4, Page 104

Utilities

The following utilities should be found in the classroom:
  One sink
  Water outlet
  Electrical outlets
    Near all display areas
    For 16mm motion picture projector in the back of the room
    Near the work bench -- for additional lighting and hot plate.

The garden area:
Faucets conveniently placed; a foot bath is needed.

Storage

Tool storage near or in the work bench.
Storage for science equipment and supplies, about 3 or 4 drawers and a cabinet with an adjustable shelf of about 30 cubic feet. See figure #16.
Garden tools are stored in custodian's storage.

Special Requirements

Centralized storerooms for equipment that can be shared by several classes
Storage cabinets for science boxes
Truck to carry boxes from the central storeroom to the classrooms.

SOCIAL STUDIES

Educational Outcomes

To help the child develop understanding of his physical, social, cultural, and economic environment so that he will be more able to meet the problems of home, school, and community living.

To help the child learn to make choices and acquire standards.

To help him understand historical, economic, and geographic facts and use them in understanding life today.

To help the child understand how man controls and modifies his environment.

To help him understand man's basic activities.

To help him appreciate and understand the importance of conversation on a world-wide scale.

To help him realize that every individual has creative abilities which can enrich his leisure.

Discernible Trends

The social studies program today is aimed at developing positive behavior patterns, self-discipline, good citizenship, and skills for working with others. Its content grows out of children's daily experiences and the study of broad topics found in geography, history, and civics textbooks and reference material. This content begins with the child's earliest experiences in the home, school, and community and gradually broadens to include the world. It is planned to provide a basic understanding of our American heritage and deeper understanding of the interdependence of peoples.

Activities	Material	Architectural Implications
Experiences related to: Learning about the home, school and community Understanding man's basic needs and how they are met: food, clothing, shelter Learning the importance of habits of health, safety, and socially, acceptable behavior	Blocks, toys, construction and manipulative materials Pictures, textbooks, & trade books. Phonograph and records	Large free floor space Storage space for all sizes of chart paper, newsprint Provision for showing films, slides, etc. Space for quiet work at desks with individual projects
Developing awareness of the contributions of people of the past, and the contributions of different cultures and learning to apply this understanding to the present	Material for drawing and painting Maps, globes, graphs, charts, and posters Collections	Bulletin boards Sinks and counter space Chalkboards Space for group construction with blocks, floor maps, grocery store, post office, farm
Growing to understand man's adjustment to his environment Understanding the geographic influences of our economic and cultural life.	Models Aquarium, terrarium, and cages for small animals and insects Materials for vision testing, measuring growth, and for health.	Space for creative dramatics Display space.

Learning democratic processes and techniques in problem solving

Cultivating a deep respect for the American heritage and way of life.

ADMINISTRATION UNIT

Educational Outcomes

Principal and administrative staff are responsible for developing and operating a positive program of education which meets the needs of pupils and is vital to the life of the community. Study, revision and implementation of new curricula are fundamental functions of the principal and staff working together. Supervision must include the assistance and encouragement of individual teachers by the principal and staff for the improvement of instruction.

Trends — Administration

The principal is devoting more time and thought to:

Leadership of the certified staff of teachers in understanding and applying curriculum design.

Leadership of staff through a modern supervisory program to improve the ability of each teacher in instruction and guidance

The principal is delegating more of the mamagerial functions and routine responsibilities -- such as routine and administrative clerical duties to staff members.

There is increasing use of specialized services.

Activities

Organization of school program and functions in accordance with Territorial and District Policy

Supervision of school program and functions in:

Guidance Counseling
Health Counseling
Curriculum design
Playground Activities
Pupil transportation and traffic -- J.P.O.'s
School lunch program

Custodial personnel
Accounting -- school funds
                    attendance
                    supplies & equipment -- ordering and inventory
                    inventories -- Territorial & County
Teachers' meetings, conferences and in-service activities
Community and P.T.A. meetings and conferences.

To adequately carry on the above activities, the following facilities need to be provided:

General Office, Principal's Office, Vice-Principal's Office, Storage Room, Lobby, Mimeograph Area, J.P.O. Room, Vault, Health Center, Counselor's Interview Room, Conference Room, Toilets.

Required space for the facilities listed is given in Part III, page 117.

Furniture and Equipment

See Part II, Pages 59-70

GUIDANCE SERVICES

Education Outcomes

Through guidance all children are helped to develop skills, to play and work with others, to express themselves, to be healthy, and to form values; to find interests; to explore the world about them; to enjoy themselves.

Some children are given special help when:

Language is a barrier
Emotions are under stress
Physical handicaps exist
Learning is difficult or potentials are not realized
Behavior is socially unacceptable

Discernible Trends

With the growth in school population the counseling staff is increasing and the services of school psychologists, social workers and guidance specialists are more in demand. As a result of these services, the classroom teacher needs more space for records and interviewing. Parent-teacher conferences are being encouraged.

Activities

The classroom teacher assumes direct responsibility for understanding the individual differences and needs of children and their adjustment to group situations. She works with pupils in the classroom to the extent of her professional competence and refers pupils who need special help to proper staff members or specialized services in the Department of Public Instruction. The teacher at times needs a private conference room where she can talk with the child, his parents or other staff or cooperating agency personnel.

Architectural Implications:

Interview room for the counselor, itinerant counselor and other special service workers.

Orientation and Relationships

The interview room should be adjacent to administrative and special service facilities.

Internal Traffic

Located out of the stream of the main traffic, so noise is limited and privacy is obtainable for entrance and exit.

Furniture and Equipment

Interview room equipped with table, chairs, filing cabinet, desk pen set, tray, telephone, small table and child's chair.

Utilities

Audio-visual

Good lighting without glare
Use of audio-visual equipment pertinent to counseling and guidance
Interviewing room needs to be soundproof

Storage

In the guidance area, shelves for professional literature, closets for personal apparel and locked areas for professional papers and equipment.

Special Requirements

Comfortable environment meeting the physical size and interest range of children for the counseling area, with provision for privacy in interviewing space. Counseling area should provide for primary grade children play material like small-sized work table for fingerpainting or hammering, or individual activity.

Enrollment

The interview room serves approximately two persons.

HEALTH SERVICES AND HEALTH CENTER

Education Outcomes

The health services program aims to help pupils acquire and understand information about themselves; to give individual health guidance and counseling; to keep accurate and complete health records of each pupil; to provide emergency care for sudden illness and accidents which take place on the school grounds.

Discernible Trends

Trends are toward expansion and improvement of health services. Parents and teachers are demanding more and better planned conferences following health appraisals and screening programs.

Activities

Health services comprise the following:

Identification of health needs by screening tests including growth measurement (height and weight), hearing acuity, vision, speech and dental inspection.

Medical evaluations to check suspected deviations from normal health and provide periodic health appraisals of apparently normal and healthy individuals.

Psychological examinations to assist in the evaluation of total health of students.

Recording and keeping of permanent, cumulative health records.

Conferences between school health personnel and teachers, parents, public health personnel (including nurses) and community health agency personnel.

Space for the health center should be ample to assure the efficient conduct of the activities listed above. There should be at least 22 feet in a straight line to permit vision testing. Privacy and quiet should be insured. There should be separate areas for some of the activities, particularly for examinations, isolation and caring for emergencies. Also, there should be separate areas for dressing and rest for boys and girls. Lavatories should be conveniently located. A waiting area adequate in size to accommodate students and parents should be provided.

Orientation and Relationships

The health center should be located so that the students can be under continuous observation of an adult and so that there is easy access to permanent records. Since many of the activities are examination procedures and personal conferences, the health center should be in a quiet section of the administrative area. There should be easy access to the health center for all members of the school staff, students and parents who call for sick children.

Internal Traffic

The waiting area should be so located in relation to the other rooms set aside for separate activities that these rooms are accessible without disturbing the quiet or privacy of on-going activities. It is desirable to have an exit from the emergency care room directly to the corridor to facilitate the care and transportation of ill or injured children. The rest areas should be partly partitioned with glass to provide for supervision of those areas by the health personnel with a minimum of moving about.

Furniture and Equipment

In addition to chairs and desks for the school health personnel and visiting public health nurse, furniture and equipment should be provided for the following areas in the health center:

Waiting and General Area
Emergency Care Area
Boys' and Girls' Rest Area
Speech and Hearing Areas
Dental Health Area
Health Counseling Area
Girls' Lavatory and Toilet
Boys' Lavatory and Toilet

For detailed listings and descriptions, See Part II, Pages 66-68.

Utilities

A telephone is essential. The main area should have several double base plugs for electrical equipment, one for lighting the vision chart. Each area and the emergency care area should have at least one double electrical outlet. The lighting in the rest areas for boys and for girls should be subdued and indirect, with electrical outlets in each. The emergency care area, the dental health area and the lavatories should be equipped with basins or sinks and handwashing facilities with hot and cold running water. Adequate electrical wiring including three separate circuits, rated 20 amperes, 120 volts, and at least four outlets to accommodate a sterilizer of 900 watts, compressor of 110 volts, dental engine (small) and lamp of 900 watts are necessary in the dental health area. A drinking fountain attachment to the sink is desirable. Proper ventilation and lighting are essential.

Audio-visual and Acoustical

Though all areas in the health suite should be noiseproof, it is essential that the area for testing hearing acuity of children should be soundproof. Such a facility would serve a dual purpose: Hearing testing by the audiometrist and examinations by the psychological examiner.

Storage

Storage space in the respective areas should be provided as follows:

Main Area:	Cabinets for forms, reports referral slips, public health nursing supplies and equipment, display materials, health pamphlets, books, laundry (clean and soiled), brooms, mops, dust pans, dust bin, pails.
Emergency Care Area:	In addition to the medicine cabinet, there should be a locked cabinet or cabinets for reserve medical first aid supplies and equipment, and equipment used by medical examiners.
Rest Areas:	Shelving and lockers or wardrobes for books, handbags, coats, sweaters. Hooks for hanging clothing should be within reach of the children for whom the unit is planned.
Examination and Treatment Areas:	Locked cabinets for supplies and equipment such as are used by specialists, including dental supplies and equipment, tape recorder, audiometer, supplies use by audiometrist, speech correctionist, psychological examiner.

Special Requirements

The health center should be made attractive with careful use of color and decoration. It is not a dispensary nor a clinic. The application of sterile and forbidding white in walls, plumbing and dress is not conductive to the dispelling of anxiety with respect to an examination, inspection, counsel, illness or accident.

In the dental health area, in districts other than Oahu, space for four straight chairs is necessary to carry on multiple-chair topical fluoride applications.

Enrollment

The health suite is an integral part of the total administrative section of a school plant. Its size is to be determined by the number of children to be accommodated in the school. Modifications for small schools should be made in the dimensions of the waiting, main, emergency care and rest areas of the suite rather than in the elimination of any of its component parts.

ADULT EDUCATION

Elementary schools should be considered as potential, adult education centers.

Elementary rooms used for Parent Conferences, Library, Auditoriums and music rooms can be adapted for adult evening classes to accommodate parents and other community people.

Educational Outcomes

Adult competency in all areas of literacy; economics; home and family life; physical fitness; safety; citizenship.

Discernible Trends

A swelling tide of adult useage of public school adult education services.

A constantly increasing demand by industry for employee-up-grading, certification, and new knowledge, for training and re-training of older workers.

A growing need (recognized) that older people and those who have retired from active business need and want further educational assistance to adjust to retirement status.

Activities

As broad usage for adults as the day school has to offer: includes classrooms, lecture halls, library, physical education, science laboratories, audio-visual, homemaking and music rooms.

Orientation and Relationships

Adult use of public school facilities is primarily an evening program and may take over the school plant at any available hour following day school adjournment (3:00 p.m., to 10:00 p.m.)

The use of schools for educational objectives should have priority over non-educational functions of community use.

Internal Traffic

Grouping of general facilities such as administrative offices, registration space, public toilets, conference rooms and auditorium. Should be easily accessible. Classrooms, laboratories and library need more quiet areas. Music and physical education are best situated where they interfere least with other activities.

Furniture and Equipment

Adult size chairs, tables and similar furniture are necessary to adult use and could be provided by the supplementary use of folding chairs.

Other equipment such as visual aids, maps, art and music equipment may also be used for Adult Education.

Utilities

Adequate lighting, both internal and external is a very important factor in the use of public buildings for evening class operation. Accessibility of lighting control panels at entrance and exit areas is important.

Audio-visual

Regular equipment and room treatment for classrooms satisfies this area for adult education.

Storage

A central storage space to handle books for resale, teachers supplementary material and craft supplies is generally sufficient. Room storage facilities except in the shop, art and craft areas is not required, although it would be enjoyed if available.

Special Requirements

Adults require more light because of eye deficiency and better acoustics because of hearing deficiency. Stairs are a hazard and walkways should be amply lighted and safeguarded for night use.

Adult education office space in addition to day school administrative area.

Enrollment

Adult classes are usually small, averaging approximately 15 student per class.

Some lectures or forums will be held in auditorium areas (large groups.)

CAFETERIA

Educational Outcomes

Establishing desirable food habits.

Developing socially acceptable mealtime behavior.

Discernible Trends

There is an increased awareness of the desirability of young children eating in smaller, more intimate groups than that provided in dining rooms and cafetoriums. As a result, many schools have adopted the classroom for eating lunch. This is especially true at the elementary level where the development of manners and social graces can be regarded as a classroom activity.

Activities

Kitchen: There are seven major activities which must be included within the kitchen area. These are: Delivery and storage of food supplies; preliminary preparation of food; cooking; serving; return of soiled dishes and dish washing; garbage disposal; general cleaning operations and laundry.

Manager's Office: Record keeping; reporting; ordering; menu planning.

Locker Room: Safe keeping of adult helpers' personal belongings.

Toilet Facilities: Use of adult helpers and separate toilets for student helpers.

Dining Room: Food service and eating.

Serving Area: Food Service

Orientation and Relationships

The cafeteria will be used by almost all students at mid-morning and at noon, therefore, it should be centrally located. The kitchen and storage areas should be readily accessible to a service driveway.

Internal Traffic

Kitchen -- Traffic lanes for trucks delivering food supplies and removing refuse should not cross student movement lanes between classes. Movement of food is from delivery area to storage, to food preparation, to serving. Further movements are those of clean dishes from dish machine to storage areas and dish machine to garbage disposal areas. Since students help in the preparation and serving of food, space must be sufficient to provide for these additional helpers.

Dining Room -- In the dining area there will be a movement from the service counter, then to the tables and then to a return area. Service areas and soiled dish return should be so placed that there is a minimum of crossing of incoming and return lines.

Serving Area -- It is recommended that this area be separated from the dining area by a sound proof partition. Doorways leading into the dining room should be conveniently placed to facilitate ingoing and outgoing traffic.

Manager's Office -- This should be provided close to the service entrance and with clear visibility of the entire kitchen area.

Furniture and Equipment

Refer to School Furniture and Educational Equipment, Auxiliary Services, Cafeteria, Part II, Pages 73-76 and Supplementary Notes for Cafeteria Plans.

Utilities

Both gas and electrical lines should be provided whenever possible. Electrical voltage should be provided for small and heavy duty appliances. The transformer and heater room should be separate from the main kitchen.

Facilities should be provided for a telephone in the manager's office and time clocks in the kitchen and dining area.

Audio-visual

Good lighting.

Sound proofing of kitchen so that the sounds of food preparation and utensil washing will not interfere with any nearby instructional program activities. Acoustical control in the dining area will be required so that meal time will foster social learnings.

Storage

Space should be provided for the following types of food, supplies and equipment: Dry storage; chill and/or freezer storage; cupboards for large pots and pans and cleaning supplies; drawers for small utensils and silver; and closed shelves for dishes. A desirable feature for the latter is dish storage carts to fit under counter space.

If food is sent on carts to classrooms or small dining areas, space for storing these carts needs to be provided.

For details on storage room, refer to Supplementary Notes for Cafeteria Plans.

Special Requirements

All surfaces, floor, walls and ceilings should be water impervious and easily cleaned. Floor surfaces should be grease resistant and easily maintained.

All work surfaces in the kitchen and on the serving and return counters should be of stainless steel except for a small wood top table for can opener.

SUPPLEMENTARY NOTES FOR CAFETERIA PLANS

Storage Of Food And Supplies Area

Storage room needs to be within sight of the office and near the delivery entrance

Graduated shelving should be planned for three walls to allow for containers of various heights. Shelves 12" wide and 15" high will provide space for #10 cans and for case goods.

Provisions should be made for a clearance of at least 36" from the floor on one side of the storeroom to provide for storage of large cartons of paper supplies, gallon bottles and bulky goods.

Space should be planned for four or five 20 - 27 gallon containers for storage of opened bags of flour, sugar, rice, etc.

A wooden rack made of slats and about 4" from the floor is needed to stack case goods and unopened bags of rice and flour. These racks should be set to allow passage way between stacks of goods.

Serving Areas

A sound proof partition with doors conveniently placed, is recommended to separate the serving area from the dining area. If there is no partition, railings used to designate service lines should be made of chains with removable posts so space can be cleared for use in community activities.

Preparation Areas

The peeler needs to discharge directly into the vegetable sink, thus eliminating the drain boards on one side.

The mixer should be located so there is sufficient space on each side so that two workers can lift the filled bowl without undue strain.

A long serving spout or flexible water outlet should be mounted in the hood over ranges.

Tables

A small wooden-top table should be provided to which a heavy duty can opener can be attached. Table could be 2' x 3' in size.

Work tables should be on casters so they can be rolled to serving counters if desired. Tables should include drawer space for small kitchen utensils.

Hand-washing Facilities

Should be in the kitchen under observation of manager.

Sinks And Drainboards

Drainboards need to be 32" high

Cook's sink installed in cook's preparation table
A 3 compartment pot-washing sink with double drainboard
A 2 compartment vegetable sink with a single drainboard
Mop sink
Handwashing facilities.

The following listing of heights for serving and work surfaces in school kitchens is recommended:

Work Surface	Height (Elementary School)
Serving Counter	32"
Cook's Table	32"
Dishwashing Counter	32"
Pot & Pan Sink	32"
Work Table	32"
Sink Counter	32"

Stove Placement

A concrete platform 1" high is needed to prevent water seepage under the stoves when hosing the kitchen floor.

Return Of Soiled Dishes

Space is needed for four garbage containers under the return counter and from 3' to 4' of counter space for stacking soiled dishes and trays.

Space should be provided for at least two dish racks before the pre-rinse sink.

Space at end of the dishwasher should be sufficient for 4 - 6 racks to stand as plastic ware dries slowly.

Exhaust Fans

A mechanical type exhaust system over the range and dish machine hood is required by the Department of Health.

Dish Machines

An electric rather than gas type booster should be provided for dish machines. It is important that there be a thermostatic control on the booster to prevent burning out the element.

LIBRARY

Introductory Statement

The elementary school library is accepted today as a vital part of the elementary school program. It is a teaching, reference, and reading laboratory for all pupils and teachers. Its resources are mustered to enrich and give meaning and content to the curriculum. The modern elementary school bases its instruction on the fullest use of all the sources of communication rather than on the traditional idea of a single textbook.

It is not enough that the instruments of learning are available. The young people must be taught their use and the enjoyment that comes from experiences with them. The library makes the tools of learning available and it is the shared responsibility of teachers and parents to aid students in the fullest utilization of these tools.

The elementary school library, as a service center for the total school should be considered as a unit. It should be a center which is attractive, functional, stimulating, flexible, quiet and easily accessible.

The total library facility should include a Central Reading room, a Storeroom, a Workroom, and a Stackroom.

Education Outcomes

Develop and encourage interest in reading as a recreational activity and for purposes of research and study

Develop an appreciation for good literature

Develop skill and resourcefulness in the use of books and other library materials.

Discernible Trends

Increasing use of the library as a service and resource center, used by all persons involved in the educational program of the school.

Guidance center in developing reading and research interests and abilities.

Depository for audio-visual materials.

Activities

Total class groups work with their teacher or the librarian on class activities.

Individuals or small groups of students work with librarian or teacher on special projects.

Individual or class groups use the library for free or recreational reading.

Teachers use the resources of the library in research.

Types of specific activities which may be carried on for the various groups listed above:

Reading and hearing many kinds of literature
Sharing reading experiences
Instruction in using books and other library materials
Instruction and experience in using research techniques
Instruction and experience in caring for books and other library materials.

Furniture and Equipment

See Part II, Pages 76-81

Orientation and Relationships

The library should be located where it will be easily accessible and free from noises.

Storage

Shelves in reading room, stackroom, workroom, storeroom.

Special Requirements

Shelves to accommodate over-size picture books and to store reference magazines.

Enrollment

Approximately 40.

MULTI-PURPOSE ROOM

Educational Outcomes

Multi-purpose rooms enrich the educational program by providing space for activities which cannot be carried on as well in the classroom.

Discernible Trends

Present tendencies toward full use of the area every period of the day and for many evening activities.

Schools are being used more as meeting places for many community groups.

School activities are developing which involve more than one group and provide for more freedom of movement.

There is a trend toward using multi-purpose rooms for food served to two or three class groups.

Activities

This room (approximately the size of two classrooms) is used for:

Small assembly groups
Dramatic activities
Rhythmic activities
School music: Chorus, Instrumental, Multi-class singing
Program preparation
Exhibits
Faculty meetings
P.T.A. meetings and community group meetings
Food service
Physical Education in-door activities

Orientation and Relationships

Near kitchen and easily accessible both to the classrooms and to public. Other classrooms should not be disturbed by singing or other activities.

Internal Traffic

Direct entrance and exit should be planned so that entering and emerging groups can be handled. Participants in programs should be able to enter the stage without going through the general seating area.

Furniture and Equipment

Portable stage -- approximately 1' height -- which can be stored when entire floor area is needed for other activities. Chairs for children and adults, stackable or folding. Darkening facilities: See Part II, Page 81.

Utilities

Toilet facilities conveniently located for public use after school hours.

Electric outlets for audio-visual equipment.

Sink and counter.

Audio-visual

Light control; sound control; wiring for stage and projection facilities.

Storage

Storage for stage props, chairs and other property when not in use.

Storage for record player, projectors, microphones when not in use.

Special Requirements

Wide doors at the back of stage so it can be used as an outdoor as well as indoor theater.

Floor of non-skid material which can be cleaned easily.

Washable walls.

FACULTY ROOMS

Educational Outcomes

Well-planned facilities maintain a high morale among the staff.

Discernible Trends

There is increasing concern for the recruitment and holding of competent teachers and meeting the needs of an increasing enrollment of children. This concern indicates a trend toward improving the working conditions of teachers.

More schools are providing a pleasant place to relax and rest with facilities for storing, dressing, resting, receiving mail and serving refreshments.

Activities

The faculty room is used for:

Dressing
Meetings of small groups, committees or faculty
Refreshments
Lockers for teachers
Rest and relaxation.

There should be one general lounge and meeting room; rest rooms; toilet and dressing facilities for men and for women.

Orientation and Relationships

The faculty room should be away from the general administrative offices and convenient to teachers.

Internal Traffic

Where facilities accommodate both men and women, consideration should be given to the placing of entrances to rest rooms and toilets away from lounge where men and women may congregate.

Furniture and Equipment

The faculty room should be equipped with attractive, functional furniture. Finishes of walls, ceilings and floors should harmonize with the furniture.

See Part II, Page 70

Utilities

Toilets

Wash basins

Double electrical outlets on each wall

Provide for sufficient lighting and ventilation

Sound proof treatment

Audio-visual

Storage

Cupboard for kitchenette equipment and supplies

Small closet or cupboard in toilet and wash basin area for supplies and cleaning equipment.

Locker space for teachers

Enrollment

Approximately 20

TEACHERS' WORKROOM

Educational Outcomes

Provide teachers with sufficient space to prepare materials important to instruction which cannot be prepared in the classroom or in other rooms.

Discernible Trends

Provide easily available facilities to teachers that cannot be provided economically in other places.

Activities

Chart work, duplicating materials, typing, preparing illustrative material and previewing audio-visual aids.

Orientation and Relationships

Locate workrooms near Classroom wings

Internal Traffic

Furniture and Equipment

See Part II, Page 71

Utilities

Sink with drainboard; adequate electrical outlets for room lighting and audio-visual projectors, darkening facilities.

Storage

Storage counter, wide enough to accommodate 18'' x 24'' paper

Space for chart paper

Cupboard space with shelves.

CUSTODIAL AREAS

Modern school plants must be adequately serviced. Specific facilities are needed by the custodian and his assistants to efficiently clean the buildings, do minor repair jobs, receive and store supplies, and maintain the school grounds.

Activities	Materials and Architectural Implications
Maintaining Buildings	
Receiving, storing and distributing supplies and equipment. Making minor repairs to school buildings, furniture and equipment.	Receiving room with direct access to roadway with space and equipment for unpacking of incoming supplies; shelving and storing tables; dolly type cart; desk and chair.

	Supply room: suitable shelves and bins for storage of janitorial supplies to contain 1/2 of 1 year's supply of most needed materials; work bench; racks for metal pieces, pipes, lumber; tool cabinets and bins; vise bench; slop sink; storage facilities with lock for poisons.
	Wash room: basin and toilet
Cleaning and maintaining classrooms and other school facilities.	One conveniently located (on each floor or in each wing) janitor's service closet and supply space should be provided for each 7500 to 10,000 sq. ft. of floor space. This closet should provide: service sink; space for mops, brooms, mop pails, step ladder, detergents, polishes.
Cleaning and maintaining toilets and washrooms.	Space near pupils' and teachers' washrooms and toilets should be provided for storing and distributing paper towels, toilet paper, soap, detergents and light bulbs.
Maintaining Grounds	Ample and convenient storage space directly accessible to the exterior, should be provided for tools and equipment needed for care of lawns, shrubs, trees, driveways and walks. Special provision should be made for storage of yard hoses, lawn mowers, ladders, and miscellaneous garden tools.
Maintaining control of meter and switch board to provide electrical current as needed.	Electrical meters and distribution panel should be located convenient to custodian's workroom where it can be readily reached in case of fire or other emergency. It should be completely enclosed and under the lock and key control of the custodian.
	Electrical outlet for clock, connected with clock system, if there is one, should be in custodian's workshop or office. About 15-20 foot candles of light should be provided. An outlet for communication between the administrative office and custodian should be provided.

Furniture and Equipment

See Part II, Pages 71-73

Utilities

Electrical outlets in all custodian's rooms.

Toilet and lavatory facilities separate from those provided for pupils, should be available for custodian.

AUDIO-VISUAL PROVISIONS

Classrooms should be cheerfully and functionally beautiful with:

Good ventilation.

Chalkboard - At least 16 linear feet and a total minimum of 24 feet. Glare proof; chalkboard rails 7" wide.

Tackboard - (Bulletin Board) - Minimum of 16 feet. This may be divided into 4 ft. sections with at least one 8-ft. section, or one 16-ft. section.

Chart and map rails, with chart hooks.

Well-lighted exhibit space in the wall, at seated-children's eyelevel, deep enough to hold students' models and other displays.

Space for dramatic activities - flannelboard, shadow screen.

Place for globes, models, objects.

Light control - avoidance of glare, provision for adequate darkening - latest approved type.

UTILITIES

Electrical Outlets

Adequate electrical outlets and switches

One immediately above the chalkboard for clock

Two double outlets along the upper edge of each work center -- one of these placed near space adequate for recording and playback equipment.

Double outlets near floor on each side of the room. One of these, usually in the rear opposite the projection screen, to be specially wired. Sound projectors draw between 800 and 1200 watts.

One three-way switch near the projector outlet for ceiling lights.

Radio (standard and fm) and TV (closed and commercial) antenna jacks.

Adequate provision for regulating air currents and still provide for circulation throughout the room.

Provision for safety in electrical features, edges and corners, doors and windows.

Water

Sink -- one sink should be provided in each classroom.

Drinking fountain -- one side-flow drinking fountain should be conveniently located for classroom use with nozzle approximately 26'' above the floor. This fixture should be entirely separate from the sink.

STORAGE

Cubicles for storing children's personal belongings.

36 cubicles, each 12'' high x 14'' long x 18'' deep (inside measurements) in units not attached to walls.

Storage closet for teacher's personal belongins, with shelves, rod and hook, 2-1/2' x 2-1/2'.

Provision for storage of wet rain apparel.

Provision for drying mops. This should be a concealed area convenient to the classroom.

Provision for storing other room cleaning facilities -- one for every 6 rooms.

SPECIAL REQUIREMENTS

Flag rack in each classroom.

Sound-proof treatment of all classrooms.

Painting or finishing of walls for adequate lighting and quiet cheerful atmosphere. Surfaces should be washable.

Floor covering or finishing that is durable, attractive, easily cleaned.

PART II

FURNITURE AND EQUIPMENT

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EDUCATIONAL SUPPLY AND EQUIPMENT REQUIREMENTS

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SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

REGULAR CLASSROOMS

Item	Description	Quantity
Chairs	Measurement of chair heights are without gliders. When in doubt order slightly lower chairs. Chairs should be sturdy but of light weight and comfortable.	1 for each child enrolled plus 8 additional pupil chairs in each classroom.
Kindergarten	12" height	12" -- 100%
Grade 1	22 -- 12" height 10 -- 14" "	Grades 1-3
Grade 2	12 -- 12" height 20 -- 14" "	12" -- 37% 14" -- 58%
Grade 3	2 -- 12" height 26 -- 14" " 4 -- 16" "	16" -- 5%
Grade 4	25 -- 14" height 7 -- 16" "	Grades 4-6 14" -- 30%
Grade 5	2 -- 14" height 30 -- 16" "	16" -- 60% 17" -- 10%
Grade 6	32 -- 16" height	
Grade 7	32 -- 16" height	Grades 7-8
Grade 8	16 -- 16" height 16 -- 17" "	16" -- 75% 17" -- 25%
Chairs (Guest)	18" height	2 per classroom
Chair (Teacher's)	A comfortable chair with arm rests	1 per classroom
Chart Stand	See figure # 1	1 per classroom 1-6
Clock	Wall-electric	1 per classroom
Container for Clay	5-gallon galvanized can 1 for white clay 1 for red clay	2 per classroom

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

REGULAR CLASSROOMS

Item	Description	Quantity
Darkening Facilities	Latest approved type	1 set for each classroom
Demonstration Table	Portable (on rollers), 20 sq. ft.; gas outlets, acid resistant top. Drawers and cabinet with shelf space for bottled gas. See Fig. # 4 appended.	1 per classroom for grades 7 & 8
Desk (Teacher's)	Termite proof. At least 3 drawers (one drawer for legal size file with lock). Enclosed front and 2 sides -- 30'' x 48'' x 30''.	1 per classroom
Easel	Adjustable legs 48'' to 55 1/2'' Simpson board. Constructed so that papers can be attached to the top of the easel with clothes-pins. See figure # 2	4 per classroom K-8
Movable Cart	Laboratory truck on casters to hold main supply of paint brushes, etc., with 1'' ledge around edge of top. See figure # 5	1 per classroom
Painting Stool	To hold paint jars; covered with washable material.	1 per classroom
Phonograph	4-speed variable speed control manually operated (see Music Guide for description)	1 per classroom K-3 1 per 2 classrooms Grades 4-8
Pencil Sharpener	Sturdy, with pencil-size adjuster	1 per classroom

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

REGULAR CLASSROOMS

Item	Description	Quantity
Radio	Portable (see Music Guide)	1 per classroom; grades 4-8
Room Divider	Portable (on casters); 3' high 4' wide, approximately 4' from floor. Tackboard on one side, chalkboard on the other.	1 per kindergarten room.
Tables	Sturdy, lightweight, dull, hard finish top.	
Kindergarten	30'' x 45'' x 22'' Sturdy, lightweight, dull, hardtop finish.	6 per classroom
Grade 1	11-22'' or 24''x48''x22'' 5-22'' or 24''x48''x24''	Grades 1-3
Grade 2	6-22'' or 24''x48''x22'' 10-22'' or 24''x48''x24''	22'' height -- 37% 24'' " -- 58% 26'' " -- 5%
Grade 3	1-22'' or 24''x48''x22'' 13-22'' or 24''x48''x24'' 2-22'' or 24''x48''x26''	
Grade 4	12-22'' or 24''x48''x24'' 4-22'' or 24''x48''x26''	Grades 4-6
Grade 5	14-22'' or 24''x48''x26'' 2-22'' or 24''x48''x28''	24'' height -- 25% 26'' " -- 42% 28'' " -- 33%
Grade 6	2-22'' or 24''x48''x26'' 14-22'' or 24''x48''x28''	
Grade 7	16-22' or 24''x48''x28''	Grades 7-8
Grade 8	8-22'' or 24''x48''x28'' 8-22'' or 24''x48''x29''	28'' height -- 75% 29'' " -- 25%
Library Table	For classroom reading or displays. Circular	

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

REGULAR CLASSROOMS

Item	Description	Quantity
	table preferred. Worktable type may be substituted.	
	48" in diameter x 20"	1 per kindergarten classroom
	48" in " x 22"	1 per 1st grade classroom
	48" in " x 24"	1 per 2nd grade classroom
	48" in " x 26"	1 per 3-4 grade classroom
	48" in " x 28"	1 per 5-6 grade classroom
	48" in " x 29"	1 per 7-8 grade classroom
Worktable	Sturdy, hardtop finish	
	36" x 60" x 20"	1 per kindergarten
	36" x 60" x 22"	1 per 1st grade
	36" x 60"x 24"	1 per 2nd grade
	36" x 60" x 26"	1 per 3rd-4th grade
	36" x 60" x 28"	1 per 5th-6th grade
	36" x 60" x 29"	1 per 7th-8th grade
Wastebasket	Large, sturdy, washable	2 per classroom
Work Bench	Portable with rollers that lock. Two vises. Space for storing lumber and tools in the base. Approximate dimensions: Top 48" x 22" x1-1/2" Base 31" long x 22" wide	
Grades K-1	25" height	1 per classroom in schools where there is no separate shop
Grades 2&3	27" "	
Grades 4&5	29" "	
Grades 6,7,& 8	31" "	

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

ADMINISTRATION OFFICES

Item	Description	Quantity
General Office		
Adding Machine	Manual	1 per school
Adding Machine	Electric	1 for schools with staff of 10 or more
Bell System and Master Clock	Electric	
Cash Box	Large, metal, with lock	2
Chair	Typewriter, standard adjustable swivel	1 for each typewriter
Chair	18" height, straight back	2
Chair	Standard, swivel, for secretary and clerk	2
Desk	Secretary's. 34"x60" standard, drawers on each side of knee space	1 per secretary
Desk	Clerk's. 34" x 60", standard with drawers and built-in space for typewriter.	1 per clerk
Files	Metal, 4-drawer, letter size	3
	Metal, 4-drawer, legal size	3
	Metal, 5" x 8" card file, 2 drawers with allowance for expansion and future intermembering with initial unit	6 drawers

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

ADMINISTRATION OFFICES

Item	Description	Quantity
	Metal, 3" x 5" card file, 2 drawers with allowance for expansion and future intermembering	6 drawers
	Storage for stencils	1
File Board	Large arch, standard legal size	1
Key File	Size depends on size of school. If the school has a vault, the keyboard should be placed in it. Tel-Key cabinet or its equivalent	1
Numbering Machine	Any approved type	1
Paper Cutter	Large-12",18", and 24"	1 each
Paper Punch	Sturdy, single punch	1 per desk
Paper Punch	Sturdy, double punch	1 per desk
Pen Set	Double	1 per desk
Pencil Sharpener	Sturdy, with pencil-size adjuster	1
Safe	Size depends on the school. Needed in schools not having a vault	1
Stapler	Sturdy	1 per desk
Table	Typewriter, standard size drop leaf	1 per typewriter
Table	Adding machine table, standard size	1

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

ADMINISTRATION OFFICES

Item	Description	Quantity
Tray	Triple for incoming and outgoing material. Standard legal size	1 set
Typewriter	14'' carriage (electric where possible)	1
Typewriter	22'' carriage. This is the first purchase for small schools	1
Typewriter	14'' carriage for clerk's desk	1 per clerk
Wastebasket	Large, sturdy, washable	1 per desk
Mimeograph Area		
Dispenser	Paper Towel	1
Dispenser	Soap	1
Machines	Mimeograph machine, standard make	1
	Ditto Machine, standard make, fluid type	1
Shelves	Under counters all around mimeograph	
Stool	Sturdy, light, rigid, 12'' x 12'' x 12'' --Remington Rand Catalog #7255 or its equivalent. See Figure #10	1
Table	For mimeograph machine. May be counter, table, or stand	1
Table	For ditto machine	1

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

ADMINISTRATION OFFICES

Item	Description	Quantity
Table	Worktable -- 30''x60'' x 32''; sturdy. One of these may be free counter top space	2
Wastebasket	Large, sturdy, washable	1
Storeroom		
Dispenser	Rolled paper 24''	1
Dispenser	Rolled paper 36''	1
Shelves	26'' x 48'' and from 4' to 6' high for storing 24'' x 36'' paper	
Vault		
Key Cabinet	Tel-Key or its equivalent. Size depends upon size of school	1
Files	Metal, letter-size, 5-drawer	3
	5'' x 8'' cards, 2 drawers	4 sets
	3'' x 5'' cards, 2 drawers	3 sets
Shelving	Adjustable shelving on long side of vault	
Step Stool	12''x12''x12'' -- Sturdy, light, rigid. Remington Rand Catalog #7255 or its equivalent. See Figure # 10	1

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

ADMINISTRATION OFFICES

Item	Description	Quantity
Lobby		
Bulletin Board	48" square feet total	1 or 2 areas
Chairs	18" height	4
Display case	Built-in (Academy of Arts' recommendation) See figure #11	1
Table	Elementary -- 24" x 48" x 26"	1
Principal's Office		
Book Case	12" x 36" x 48" -- 12"x36"x48" -- three shelves. May be built in	1
Bulletin Board	20 square feet	1
Chair	Adjustable, executive type	1
Chair	18" height; straight back	6
Desk	Executive type with overhang. Approximately 36" x 72"x30"	1
File	Metal, legal size, 2 drawers with lock	1
Pen Set	Standard	1
Table	36" x 60" x 29" for displays, work or conferences	1
Trays	Triple, for outgoing and incoming material. Legal size	1 set

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

ADMINISTRATION OFFICES

Item	Description	Quantity
Wastebasket	Large, sturdy, washable	1
Vice-Principal's Office		
Book Case	12" x 36" x 48"; 3 shelves. May be built in.	1
Bulletin Board	20 square feet	1
Chair	Same as principal's. Executive, adjustable type.	1
Chair	18" height, straight back	6
Desk	Same as principal's. Executive type with overhang. Approximate size 36" x 72" x 30"	1
File	Metal, legal size, 4 drawers with lock	1
Pen Set	Standard	1
Table	36" x 60" x 29" for displays, work or conferences	1
Tray	Triple, for outgoing and incoming material, legal size	1
Wastebasket	Large, sturdy, washable	1
Adult Education		
Chairs	Folding type, adult size	1 per enrollee

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

COUNSELOR'S OFFICE & INTERVIEW ROOM

Item	Description	Quantity
Book Case	12" x 36" x 48" -- 3 shelves. May be built in	1
Bulletin Board	20 square feet	1
Chair	Executive type, adjustable	1
Chairs	18" height, straight back	6
Desk	Termite proof. At least 3 drawers. One drawer for legal size file with lock. Enclosed front and two sides. Same as teacher's desk	1
File	Metal, 4-drawer, legal size with lock	1
Pen Set	Standard	1
Table	Standard typewriter with drop leaf	1
Table	36" x 60" x 30" for displays, work or conference	1
Tray	Triple tray, standard, legal size for outgoing and incoming material	1
Typewriter	14" carriage	1
Wastebasket	Large, sturdy, washable	1

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

HEALTH CENTER

Item	Description	Quantity
Waiting and General Area		
Scale	Platform, with height rod	1
Mirror	Full length	1
File	Metal, letter-size 4-drawer with lock	1
File	Metal, 2-drawer, 5''x 8''	2-4
Typewriter	14'' carriage	1
Chair	Typewriter, standard, adjustable	1
Table	Elementary Conference 30'' x 48'' x 26''	1
Wastebasket	Large, sturdy, washable	2
Display board	Tackboard, 20 sq. ft.	1
Book case	Standard for classroom	1
Pencil sharpener	Sturdy with pencil size adjuster	1
Pen Set	Standard	1
Tray	Triple standard, legal size	1
Desk	Executive type, approximately 36'' x 72'' x 30''	1
Chair	Comfortable, with arm rest	1
Emergency Area		
Table	Washable top, 2' x 3'	1

HEALTH CENTER

Item	Description	Quantity
Cabinet	Medicine, for first aid supplies	1
Stool	With back, 36" height	1
Stool	Without back, 18" height	1
Dispenser	Soap, any standard make	1
Dispenser	Paper towel, any standard make	1
Tray	Instrument, medium size, stainless	1
Disposal can	Large, trip-top, sturdy, washable	1
Emesis basin	Stainless	1
Boys and Girls Rest Area		
Cot	Sturdy, light folding	2 or 2 for every 500 enrolled
Mattress	Sturdy, cotton	1 for each cot
Mattress cover	Sturdy, washable	2 for each cot
Sheet		2 for each cot
Pillow	Waterproof covering	1 for each cot
Pillowcase		2 for each cot
Blanket	Lightweight	2 for each cot
Wastebasket	Small, sturdy, washable	1 for each room
Girls' Lavatory and Toilet		
Dispenser	Soap, any standard make	1

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

HEALTH CENTER

Item	Description	Quantity
Dispenser	Paper towels, any standard make	1
Dispenser	Sanitary napkin, any standard make	1
Disposal can	Trip-top, medium, sturdy, washable	1
Boys' Lavatory and Toilet		
Dispenser	Soap, any standard make	1
Dispenser	Paper towels, any standard make	1
Speech and Hearing Area		
Table	30'' x 48'' x 26''	1
Chair	14'' height	1-5
Chair	Comfortable, with arm rest	2
Dental Health Area		
	Desk or work table, counter space and space for file boxes, cuspidor, sterilizer and instrument case	
Health Counseling Area		
Chair	Cushioned and comfortable	3
ADULT EDUCATION		
Chairs	Adult, folding type	1 per enrollee

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

Item	Description	Quantity
J.P.O. Room		
Chair	18" height, sturdy, straight back	2
Clothes Rack	72" x 60" Rod-type on casters	1
Clothes Hangers	Wood, sturdy	50
Mirror	12" x 18"	1
Shelving	12" deep for helmets	50 linear feet
Sign Rack	One that will hold signs upright. May be built in.	Varies with location of school
Table	24" x 48" x 32"	1
Wastebasket	Large, sturdy, washable	1
Conference Room		
Bulletin Board and Chalk Board	32 sq. ft. Combination chalk and tackboard	1
Chair	18" height, straight back	12 or more depending on size of room and school
Pencil Sharpener	Sturdy, with pencil-size adjuster	1
Table	42" x 42" x 30"	5 or more
Wastebasket	Large, sturdy, washable	1
Toilets		
Dispenser	Soap dispenser, any standard make	1
Dispenser	Toilet Paper	1 per stall

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

Item	Description	Quantity
Dispenser	Paper towel	1
Garbage Can	Large, trip-top	1
Wastebasket	Large, sturdy, washable	1
Dressing counter	12" x 24" counter, with mirror	1
Faculty Room		
Chair	Comfortable occasional type	3
Chair	Straight back	2
Coffee table	20" x 40" x 14" to 18"	1
Hotplate	2-burner	1
Lamp	(Table (Standing	1 1
Mirror	Full length	1
Punee	Narrow or twin bed size	2
Punee cover	Fitted to punee	2
Refrigerator	6 cubic feet	1
Settee	Commercial type	1
Stand	To accommodate hotplate	1
Table	42" x 42" x 18"	1
Table	End tables for punees	2
Wastebasket	Large, sturdy, washable	1

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

Item	Description	Quantity
Teachers' Workroom		
Table	Work table, 30" x 60"	2
Chair	Straightback	4
Shelves	Movable, 16" deep for magazines, paper, etc.	1 set
Typewriter	Any approved type	1
Typewriter	Primary type	1
Table	Typewriter tables with drop leaf	2
Chair	For typist, any approved type	2
Duplicating machine	Any approved type	1
Wastebasket	Large, sturdy	1
Pencil sharpener	Sturdy, pencil-size adjuster	1
Easel	Adjustable legs, 55" to 60"	1
Paper Cutter	Large, 24"	1
Paper Punch	Sturdy single punch	1
Paper Punch	Sturdy double punch	1
Kiln	Any type approved by the Building Services Department	1 per school
CUSTODIAN'S ROOMS		
Bulletin Board	16 square feet	1

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

Item	Description	Quantity
Cabinet	Type suitable for storing small hardware	1
Cart	Low, dolly-type for moving furniture	1
Chair	18" straight back	2
Clip Board	Large arch	1 for each janitor
Desk	30"x48"x30". Termite proof (same as teacher's)	1
File	Metal, for 5"x 8" cards 2 drawers	1
Key Cabinet		1
Pencil Sharpener	Sturdy, pencil-size adjuster	1
Rack	For garden hose	1
Rack	For tools	1
Floor polishing machine	Standard	1
Floor scrubbing machine	Standard	1
Table or Bench	Sturdy with vise, for repair work	1
Wire Cip		1
Hammer		1
Iron Bar	Study, to use for opening crates, etc.	1
Table or Counter	30" high, not more than 30" wide, for assorting, wrapping, etc.	1

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

Item	Description	Quantity
Shelving	Type suitable for holding packages of paper towels, toilet paper, soap, paints, cleaning compounds, light bulbs, mops, brushes.	1
Sink	Slop sink lip not more than 10 " to 12" from floor; with overhead hose bib -- may be porcelain, terrazzo, concrete, or similar materials	1
Lawn Mower	Power-type	1
Ladder	Extention	1
Garden tools	Hoes, rakes, spades, trowels, clippers	1
Locker	Tall-type, for hanging clothes	1 for each custodian
Insecticides and fertilizers	Locked closet for poisons	1
Saw	Rip	1
CAFETERIA Manager's Office		
Adding Machine	Standard make	1 per cafeteria
Chair	Secretary's swivel type	1 per cafeteria
Desk	Standard metal with typewriter space built in 36" x 60"	1 per cafeteria
File	Metal, 4-drawer, letter-size, with lock	1 per cafeteria

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

CAFETERIA

Item	Description	Quantity
Pencil Sharpener	Sturdy, with pencil-size adjuster	1 per cafeteria
Typewriter	20" carriage	1 per cafeteria
Wastebasket	Sturdy, large, washable	1 per cafeteria
Kitchen		
Dish Machine	500 or over Automatic with 5 K.W. Emersion Water Heater in wash tank	1 per cafeteria
Drier, Clothes	Domestic model, gas or electric	1 per cafeteria
Food Cart	Designed to transport food to kindergarten-grade 3	1 for each 3 classrooms to be served.
Mixer	300-500 With 12 quart Adapter, Bowl, Beater and Whip; 1 only Vegetable Slicer, "12-9"; 1 only Shredder Plate, 1/16"; 1 only Meat Grinder; 1 only Bowl Truck	1 per cafeteria
	500 or over 30 qt. Adapter, Bowl, Beater and Whip; 1 only Vegetable Slicer "12-9"; 1 only Shredder Plate 3/16"; 1 only Meat Grinder; 1 only Bowl Truck	1 per cafeteria
Oven, Bake	800 Gas, 2 decks, 7" high, 42" wide (100% safety control)	1 per cafeteria

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

CAFETERIA

Item	Description	Quantity
	Over 800 Gas, 3 decks, 42" wide, 1 deck 12" with extra rack and two 7" decks (100% safety control)	1 per cafeteria
	OR	
	800 Electric, 2 sections	1 per cafeteria
	Over 800 Electric, 3 sections	1 per cafeteria
Peeler	300 or over 15#, Pedestal Type with peel Trap	1 per cafeteria
Ranges	200-400 Gas, Heavy Duty with 4 large Burners, 2 oven racks and safety device (100% shut-off unit)	1-2
	400-600 same as above	2-3
	600-800 same as above	3-4
	OR	
	200-400 Electric, 3 French Hot Plates plus 2 super Hi-Speed Calrod units with oven	1-2
	400-600 Electric, 3 section cook top, with oven	2-3
	600-800 Electric, 3 section cook top, with oven	3-4
Refrigerators	Less than 500 20-30 cu. ft., self contained unit	1 per cafeteria

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

CAFETERIA

Item	Description	Quantity
	500-800 47-52 cu. ft., self contained unit	1 per cafeteria
Washing Machine	Non-automatic preferred	1 per cafeteria
Water Heater	Gas, 400 gal. storage tank; Booster Water Heater; Circulating Pump. Aquastat, Pressure and Temperature Relief Valva	
	OR	
	Oil, including mixing valve, 550 gal. oil tank	1 per cafeteria
Serving Area		
Cashier's Table	24'' x 24'' x 28''	1 per serving line
Cashier's Chair	18'' height	1 per serving line
Dining Room		
Chairs	Sturdy, lightweight and stackable	1 per pupil for 1/2 the enrollment in grades 4, 5, 6
Tables	To accommodate pupils in grades 4, 5, 6. Fold away, on casters, light weight, and stackable or inwall 30''x 96''x 26''	1 per 10 pupils
LIBRARY		
Reading Room	Based on enrollment of 800	
Book Display Case	Small. commercially made. See figure #2.	1 per school

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

LIBRARY

Item	Description	Quantity
Book Truck	Any of several types available from a standard library equipment company. Rubber bumpers. Remington Rand Catalog #7607.1 or its equivalent	1 per 500 pupils
Book Supports	Standard or folio-type, available from a standard library equipment and furniture company	1 for each shelf plus 10
Bulletin Board	32 square feet	1 per reading room
Card Catalog Cabinet	15-drawer unit with 24" depth, 2-drawer cabinet as base with allowance for expansion and future intermembering with initial unit. Purchase should be made from a standard library equipment company. See figure #8. Also see figure # 7.	1 unit
Chair (Librarian's)	Executive type	1 per school
Chair (Typing)	Standard adjustable	1 per library
Chair (pupil's)	14" height 16" "	24 16
Charging Desk	32" height -- any of several types available from a standard library equipment and furniture company. See figure #13	1 per school
Desk (librarian's)	Executive type with overhang. Same as principal's	1 per school

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

LIBRARY

Item	Description	Quantity
Dictionary Stand	Commercial type. Free standing. May be combined with Atlas stand See figure #9	1 per school
Display Cabinet	See figure #11	1 per school
Display Letters and Numbers	Set of pin-back letters and numbers: set of plain-back letters and numbers	1 set each per school
Storage Cabinet	for science, library or control storage. See Figure #16	1 per school
Push Cart	Add ledge to top surface	2 per school
File	Metal, 4-drawer, legal size	1 per reading room
File	X-ray file -- 19" x 16" -- 3 drawers: same height and depth as legal size file	1 per school
Filmstrip Cabinet	Should be purchased from standard library equipment company. Allow for expansion	To hold 100 filmstrips
Globe	16", simple, and political	1 per reading room
Grocery Chart	Large sturdy	2 per library
Magazine Rack	12" x 36" x 60" See figure #15	2 sections per library
Newspaper Rack	See figure #14	1 per school
Record Cabinet (Phonograph)	See figure #3	1 per school

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

LIBRARY

Item	Description	Quantity
Section Label Holder	Purchase from a standard library equipment & furniture company	1 per section
Shelf-label Holder	Purchase from a standard library equipment & furniture company	Approximately 1 per shelf
Shelving	Adjustable	700 running feet
Stool	20'' height. Round top. To use back of the charging desk.	2
Stool	Low, light, rigid. 12'' x12''x12''. Purchase from standard library equipment and furniture company. See figure #10	2
Table	Sturdy, lightweight, dull hardtop finish	
	36'' x 60'' x 26''	6
	36'' x 60'' x 28''	4
Table (Round)	48'' diameter x 28'', finished to match 36'' x 60'' tables	1
Table (Sloping)	17'' x 78'' x25'' with bench 14'' x 69'' x 15''. Finish to match 36'' x 60'' tables	2 each
Table (Trapazoidal)	Suggested for trail use in 1 or 2 libraries. Check with principal and librarian before ordering. 26'' height	12
	28'' height	12
Typewriter	14'' carriage, elite type, card holding platen	1

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

LIBRARY

Item	Description	Quantity
Typewriter	Standard -- Pica	1
Typewriter	Standard -- Primer	1
Typing Stand	Standard commercial	3
Workroom		
Bulletin Board	12 square feet	1 per workroom
Card Catalog File	Shelf list and order card file. 9-drawer unit, with allowance for expansion. Commercial-type. See figure #6	1 per workroom
Chair	16"	2
Counter	16" wide, all available space	
Stool	24" high	1
Stool	Low, light, rigid, 12" x 12" x 12; See Figure #10	2
Paper Cutter	12"; 18"; 24"	3 (1 each)
Shelving and drawers	Adjustable, open and closed 16" wide under counter; 9" wide above counter	
Table	Sturdy, 36"x60"x32". This table is needed in addition to counter space	2
Stack Room		
Bulletin Board	6 square feet	1

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

LIBRARY

Item	Description	Quantity
Shelving	Free standing, sectional, adjustable, not to exceed 5'6'' in height	
Stool	12'' x 12'' x 12''; see Figure # 10	2
Table	Worktable, sturdy, 36'' x 60'' x 32''	
Storage Room		
Map Rack		To hold 64 maps
Shelving	For globes, projectors, phonographs, reference magazines.	

MULTI-PURPOSE ROOM

Chairs	Sturdy, lightweight, and stackable	1 per pupil for 1/2 the enrollment in grades 4, 5, 6
Piano	Grand or small upright on heavy caster base	1 per school plus 1 per each 300 additional pupils
Stage	Portable, 1 ft. high, largage enough to accommodate 1 class	
Tackboard	4' wide	On all appropriate wall spaces
Table	To accommodate pupils in grades 4, 5, 6. Fold away, on casters, lightweight, and stackable, or inwall, 30'' x 96'' x 26''	1 per 10 pupils

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

PLAY AREAS

Item	Description	Quantity
Field Area		
Softball Backstop	Jamison B-110-C or its equivalent	1-4 per school
Volleyball Standard	Portable. Galvanized pipe.	1-4 sets per school
Dry Line Marker	Lowe & Campbell #8515 or its equivalent	1 per school
Dry White Line Powder	Lowe & Campbell #E8551 or its equivalent	10 bags per school
Football Goalposts	Jamison F-30-G or its equivalent	1 set per school
High Jump Standards	Gill official G-50 or its equivalent	1-2 sets per school
Paved Area		
Basketball Standards and Goals	Jamison B-303F or DL-304-E or its equivalent Basket rim 8-1/2 feet from ground.	1-4 pairs per school
Volleyball Posts	Jamison NE 20 or its equivalent	1-4 pairs per school
Tetherball Balls	Jamison TB-2 or its equivalent	1-4 per school
Kindergarten Area		
Low (Turning) Bar	Jamison 310 or its equivalent 3' high, 8'-'2-long	1 per area
Climbing Structure	Jamison 470 or its equivalent Pipe or wood	1 per area
Sandbox	8' x 20' or 12' x 12' covered	1 per area

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

PLAY AREAS

Item	Description	Quantity
Slide	Jamison CS50 or its equivalent 5'-6' high with safety platform	1 per area
Primary Area		
Low (Turning) Bar	Jamison 310 or its equivalent 3-1/2' high, 8-12' long	1 per area
Climbing Structure	Jamison 9812 or its equivalent 7' - 9' high	1 per area
Balance Beam	Jamison BB-15-G or its equivalent 12'' high, 15' long, Wood or 2-3/8'' pipe	1 per area
Slide	Jamison CS-60 or its equivalent 8' high, safety platform	1 per area
Middle Grades Area		
Horizontal Bars	Jamison HA-203 or its equivalent 5'-5-1/2' single, double or triple at various heights	1 per area
Swing Rings	Jamison MR-216 or its equivalent Top Beam 7' high	1 per area
Horizontal Ladder	Jamison #616 or its equivalent 6-1/2'-6' high, 12' long, rails 2-3/8'' pipe	1 per area
Upper Grades Area		
Horizontal Bars	Jamison HA-253 or its equivalent 5-1/2'-6' high, single, double or triple at various heights	1 per area

SCHOOL FURNITURE AND EDUCATIONAL EQUIPMENT

PLAY AREAS

Item	Description	Quantity
Climbing Ropes or Poles	Jamison R-316 or its equivalent 1-1/2" diameter hemp or manila. Top beam 10' high	1 per area
Indoor Play Area		
Tumbling Mats	Peterson Superlite Gym Mat #530 or its equivalent (plastic covered) 3' x 6' x 2"	4-8 per school
Record Player	Caliphone #14V-7 or its equivalent	1-2 per school
Records	Folk and square dance	6-10 per grade level
Table Tennis Tables	Top 9' x 5' x 3/4" plywood. Horse supports	1-6 per school
Table Tennis Sets	Wilson E6014 or its equivalent	1-6 sets per school

B. EDUCATIONAL SUPPLY AND EQUIPMENT REQUIREMENTS

Item		Kdgtn.	1	2	3	4	5	6	7	8
Classrooms										
Book ends	prs.	3	3	3	3	3	3	3	3	3
Chalk	box		4	4	4	4	4	4	4	4
Chalk liner for board			1	1	1	1	1	1	1	1
Cleanser	can	3	3	3	3	3	3	3	3	3
Cleansing tissues	box	6	6	6	6	6	6	6	6	6
Colored pencils		6	6	6	6	6	6	6	6	6
Desk blotters		2	2	2	2	2	2	2	2	2
Detergent	qt.	1	1	1	1	1	1	1	1	1
Ditto Fluid		1	1	1	1	1	1	1	1	1
Erasers, art gum		1	1	1	1	1	1	1	1	1
Erasers, blackboard	doz.	1	1	1	1	1	1	1	1	1
Eraser, pencil		1	1	1	1	1	1	1	1	1
Fasteners	box	2	2	2	2	2	2	2	2	2
Flag wall holder		1	1	1	1	1	1	1	1	1
Fountnbrush		1	1	1	1	1	1	1	1	1
Fountnbrush ink	btl.	1	1	1	1	1	1	1	1	1
Gummed tape, 1"	roll	1	1	1	1	1	1	1	1	1
Household cement	tube	1								
Ink, bottle		1	1	1	1	1	1	1	1	1
Master sets for duplicator, 8-1/2 x 13 (50 sets per box)		1	1	1	1	1	1	1	1	1
Mirror, 12" x 18"		1	1	1	1	1	1	1	1	1
Paper clips	box	2	2	2	2	2	2	2	2	2
Paper, duplicating or ditto	rm.	1	5	5	5	5	5	5	5	5
Paper napkins	case	1	1	1	1	1	1	1	1	1
Paper towels	ctn.	1	1	1	1	1	1	1	1	1
Pen, desk, ball point		1	1	1	1	1	1	1	1	1
Pencil		6	6	6	6	6	6	6	6	6

Item		Kdgtn.	1	2	3	4	5	6	7	8
Pointer		1	1	1	1	1	1	1	1	1
Punch, one-hole		1	1	1	1	1	1	1	1	1
Rubber bands	box	1	1	1	1	1	1	1	1	1
Rubber cement	jar	1	1	1	1	1	1	1	1	1
Ruled ink letterhead	rm.	1	1	1	1	1	1	1	1	1
Safety pins	box	1								
Scissors, large, 8"		1	1	1	1	1	1	1	1	1
Scotch tape	roll	1	1	1	1	1	1	1	1	1
Sleeping bags		32								
Soap	cake	15	15	15	15	15	15	15	15	15
Staples (5,000)	box	1	1	1	1	1	1	1	1	1
Tape, transparent-mending 5/8"		1	1	1	1	1	1	1	1	1
Thumb tacks, glass headed push pin	box	2	2	2	2	2	2	2	2	2
Twine	cone	1	1	1	1	1	1	1	1	1
Vegetable glue	can	1	1	1	1	1	1	1	1	1
Yard stick		1	1	1	1	1	1	1	1	1
Block Activities & Dramatic Play										
Block accessory floor type toys (2 trucks, 2 boats, airplane, train)	set	1								
Cash register		1	1	1						
Blocks, solid floor (450 pieces)	set	1								
Blocks, hollow (32 pieces)	set	1	1							
Block accessories for farm, city, dock	set	1								

Item		Kdgtn.	1	2	3	4	5	6	7	8
Block accessories - people and animals	set	1								
Boards for use with hollow blocks, 1/2" ply, 5-1/2" x 44"		6								
Playhouse Activities										
Telephone		2	2							
Dolls		2	2							
Iron		1								
Cleaning equipment (broom, dust pan, floor brush, floor mop)	set	1								
Kitchen utensils	set	1	1							
Doll carriage or Stroller		1								
Dishes	set	1	1							
Knives, forks, spoons	set	1								
Ironing Board		1								
Washboard & washtub	set	1								
Doll Bed		1								
Materials for doll corner furniture: (Cupboard, stove, sink, refrigerator)	set	1								
Arithmetic Experiences										
Decimal fraction material							1	1	1	1
Combination fraction chart on one side & hundred board on other			1	1	1	1	1	1	1	1
Place value pocket - ones, tens, hundreds			1	1	1	1	1	1	1	1
Clock Face		1	1	1	1	1	1	1	1	1

Item		Kdgtn.	1	2	3	4	5	6	7	8
Spinno						1	1	1	1	1
Thermometer Chart			1	1	1	1	1	1	1	1
Fractional Parts (enlarged with cohere-o-graph)							1	1		
Language Arts, Social Studies, & Quiet Activities										
Sewing kit:	set									
Needles, assorted	pkg.	1	1	1	1	1	1	1	1	1
Thread, black	spool	1	1	1	1	1	1	1	1	1
Thread, white	spool	1	1	1	1	1	1	1	1	1
Thread, embroidery	skein	6	6	6	6	6	6	6	6	6
Common pins	box	1	1	1	1	1	1	1	1	1
Cotton material	yard	5	5	5	5	10	10	10	12	12
Folders, ring binder					32	32	32	32	32	32
Cotton batting	lbs.	2								
Notebooks, spiral, 8-1/2x11			96	96	96	96	96	96	96	96
Folder papers	rms.			1	6	12	12	12	18	18
Paper, bristol board, 22-1/2 x 28-1/2	shts.		6	6	6	6	6	6	6	6
Paper, chart unlined, 40 x 48	per C	1	1	1	1	1	1	1	1	1
Paper, chart lined, 40x48-1"	per C		1	1	1					
Viewmaster reels		3	3	3	3	3	3	3		
Pen, ball point							32	32	32	32
Pen refills							32	64	64	64
Paper, newsprint, unlined, 6 x 9	rm.		1	4	4	24	24	24	24	24
Paper, newsprint, unlined, 9 x 12	rm.		1	1	1	1	1	1		

Item		Kdgtn.	1	2	3	4	5	6	7	8
Paper, newsprint, lined 1/2" 9 x 12	rm.		2	6	8					
Paper, newsprint, lined 1" 9 x 12	rm.		6	4						
Paper, newsprint, lined 1/2" 12 x 18	rm.		2	4	4					
Paper, oaktagboard (flash card) 4 x 24		50	200	200	50	50	25	25	25	25
Pencils, large primary	doz.		9	9						
Pencils, #2	doz.				16	16	16	16	16	16
Reinforcements	box				32	32	32	32	32	32
Rulers			32	32	32	32	32	32	32	32
Erasers (Eberhard)			32	32	32	32	32	32	32	32
Lotto games -- manuscript letters		5	6	6	3					
Viewmaster		3	3	3	3	3	3	3		
Beads, wooden		2								
Tinkertoy, large		2	2	2	1	1	1	1		
Bingo - numbers						1	1	1	1	1
Old Maid			3	3	3	3	3	3		
Parchesi							1	1	1	1
Puzzles, wooden inlays & Jig saw		12	12	6	6	6	6	6	6	6
Checkers			3	3	3	3	3	3	4	4
Chess set								1	1	1
Flannelgraph		1	1	1	1	1	1	1	1	1
Puzzle case		1	1							
Globe		1	1	1	1	1	1	1	1	1

Item	Kdgtn.	1	2	3	4	5	6	7	8
Maps, world			1	1	1	1	1	1	1
Maps, others				1	2	3	3	4	4
Chart rack		1	1	1					
Chart, com. chart & Bigh Book Holder		1							
Science Experiences									
Animal Cage, Approx. 12 x 20 x 15''	1	1	1	1	1				
Ant House, Observation type								1	1
Aquarium. 6 to 8 gal.	1	1	1	1	1	1	1	1	1
Aquarium, dip net	1	1	1	1	1	1	1	1	1
Balance, Triple Beam, capacity 1610 grams								1	1
Balances, Spring, 2000 grams and 72 ounces								3	3
Ball and Ring								1	1
Ballons, rubber, with valves								12	12
Barometer, Aneroid, 5 in. dia.								1	1
Barometer Tube and Mercury Cup								1	1
Battery Jars, 6 in. x 8 in.								3	3
Beakers, Pyrex, 250								6	6
Beakers, Pyrex, 600								6	6
Beakers, Pyrex, 1,000								6	6
Bells, Electric								2	2
Bottles, wide mouth, 16 oz.								6	6

Item		Kdgtn.	1	2	3	4	5	6	7	8
Bunsen Burner										1
Buttons, Push										2
Candles, box										1
Clamps, Burette										2
Compass, Magnetic, 45 mm. dia.			1	1	1	1	1	1	1	1
Corks, Assorted, 100 #0 to 11,	pkg.									1
Crucibles, Porcelain, #0										2
Darning Needles,	pkg.									1
Dry cells							2	2	2	6
Filter paper, 11 cm. diam.,	pkg.									1
Fire making outfit										1
First Aid Cabinet										1
Flashlight										1
Forceps, 5 inch										1
Friction Rod, Glass										1
Friction Rod, Hard Rubber										1
Funnel, 65 mm. Diam.										1
Globe, tellurian										1
Graduated Cylinder, 50 cc.										1
Heat Conductibity Apparatus										1
Hot Plate, Electric										1
Insect boxes, 12 x 10 in.		1	1	1	1	1	1	1		1
Insect net		1	1	1	1	1	1	1		1
Iron Filings, coarse,	1 lb.									1
Lamps, Miniature										2

Item		Kdgtn.	1	2	3	4	5	6	7 8
Lamp Chimneys									2
Lamp Sockets, Miniature									2
Lenses, demonstration,	set					1	1	1	1
Loadstone									1
Magnet, Horseshoe,	10 cm.	1	1	1	1	1	1	1	1
Magnet Rods, Steel,	pkg.								1
Magnets, Bar,	pr.	1	1	1	1	1	1	1	1
Magnifier Tripod		1	1	1	1	1	1	1	1
Medicine Droppers									12
Meter Stick									1
Mirror, Concave and Convex, 3 in. diam.									1
Mirror, Plane, Approx. 4"x6"									1
Pad, Flannel									1
Pad, Silk									1
Pans, Enamel,	4 pints								2
Petri Dishes, Pyrex, 100 x 12 mm.									2
Pith Balls,	pkg.								1
Prism, Equilateral, 25 x 100 mm.		1	1	1	1	1	1	1	1
Pulleys, single									2
Pulleys, double						2	2	2	2
Pump, force									1
Pump, lift									1

Item		Kdgtn.	1	2	3	4	5	6	7 8
Pump, Pressure and Vacuum									1
Reading Glass, 2 to 3 in. diam.		1	1	1	1	1	1	1	1
Ring Stand, with 2 rings									1
Rotator, Hand with Color Disk									1
Rubber Stoppers, Assorted,	lb.								1
Rubber Tubing, 1/4 in.,	10 ft.								1
St. Louis Motor with Electromagnet Att.								1	1
Switch, Single Pole, Double Throw									1
Telegraph Key						1	1	1	1
Telegraph Sounder						1	1	1	1
Telephone Receiver						1	1	1	1
Telephone Transmitter						1	1	1	1
Terrarium, approx. 18 x 10 x 16 in.								1	1
Test Tubes, 6 in.									12
Test Tube Support, 12 tube									1
Thermometer, 220 degrees F.		1	1	1	1	1	1	1	1
Tripod, Iron									1
Trowel, Garden									1
Tuning Forks, C, E, G, C^1	set	1	1	1	1	1	1	1	1
Voltmeter, Pocket									1
Washington School Collection Rocks and Minerals									1
Watch Glasses, 2 in. diam.,	doz.								1

Item		Kdgtn.	1	2	3	4	5	6	7 8
Weather Maps, U.S. Weather Bureau, Subsc.									1
Wire, Copper, D. C. C., #20,	lb.		1	1	1	1	1	1	1

CHEMICALS

Item		Kdgtn.	1	2	3	4	5	6	7 8
Acid, Acetic, 36% CP,	lb.								1
Acid, Boric, crust., pure,	oz.								4
Acid, Hydrochloric, cond, CP,	lb.								1
Acid, Sulfuric, comc., CP,	lb.								1
Agar Nutrient,	oz.								4
Alchohol, methyl,	qt.								1
Aluminum potassium sulfate, pure,	lb.								1
Ammonium hydroxide, conc.,	lb.								1
Calcium carbonate (marble chips),	lb.								1
Camphor, refined,	oz.								4
Carbon, wood charcoal, lamps,	lb.								1
Copper metal, turnings,	lb.								1
Copper Sulfate, cryst., tech.,	lb.								1
Iodine, cryst.,	oz.								4
Iron, Metal filings, coarse,	lb.								1
Lead, Metal, granular,	lb.								1
Litmus Paper, blue, vial									1

Item		Kdgtn.	1	2	3	4	5	6	7	8
Litmus Paper, red, vial									1	
Manganese dioxide powder, tech.,	lb.								1	
Mercury metal, tech.,	lbs.								3	
Paraffin,	lbs.								2	
Potassium Chlorate, pure,	lb.								1	
Sodium Bicarbonate, pure,	lb.								1	
Sodium Hydroxide, pellets, CP,	lb.								1	
Zinc metal, mossy, tech.,	lb.								1	
Physical Education & Outdoor Activities										
Basketball, rubber, junior, Pennsylvania PBH-6 or its equivalent						1	1	1	1	1
Basketball, rubber, Official if court is available									1	1
Bean Bags, 4" x 4"		10	10	10	10	10	10			
Football, Midget, rubber, Voit Jr., Official or its equivalent		1	1	1						
Football, Jr., rubber, Pennsylvania PFH-6 or its equivalent					1	1				
Football, Official, rubber, Voit, or its equivalent							1	1	1	1
Football, Leather, Official, Wilson FII-34 or its equivalent							1	1	1	1
Indian Clubs, Medart #268 or its equivalent					12	12	12	12	12	12
Jump Ropes, long and for lines, 33', #7 Sashcord, or 3/8" rope hank		3	3	3	3	3	3	3	3	3

Item	Kdgtn.	1	2	3	4	5	6	7	8
Jump Rope, short, 8', #7 Sashcord or 1/4" - 38" rope hank	10	10	10	10	10	10			
Kickball, rubber, Voit RS-3 or its equivalent			1	1	1				
Pasteboard Squares, 24" x 24"	10	10	10	10					
Playground Ball, rubber, 6", Pennsylvania PGB-6 or its equivalent	1	1							
Playground Ball, rubber, 8-1/2" Pennsylvania PGB-8-1/2 or its equivalent	1	1	1						
Playground Ball, rubber 10", Pennsylvania PGB-10 or its equivalent	1	1	1	1					
Playground Ball, rubber, 13" Pennsylvania PGB-13 or its equivalent				1	1	1	1		
Ropes for lines, 100', #7 Sashcord or 1/4" - 38" rope					4	4	4	4	4
Soccer Ball, rubber, Voit LS-3 or its equivalent					1	1	1	1	1
Soft Softball 12", rubber, Pennsylvania PIC-12 or its equivalent				2	2	2	2		
Softball, rubber, smooth seam 12"								2	2
Softball Bat 31", Hannah #GSB						2	2		
Softball Bat 33", Hannah #GSB								2	2
Softball bases, Spalding #1922 or its equivalent				3	3	3	3	3	3
Super Softball 12", rubber Voit C-812 or its equivalent		2	2						

Item		Kdgtn.	1	2	3	4	5	6	7	8
Tetherball (Pole Extra)						1	1	1	1	1
Volleyball, rubber, official, Wilson, H-5054 or its equivalent				1	1	1	1	1	1	1
Volleyball Net, Twine, Weatherproof #24 Thread					1	1	1	1		
Volleyball Net, Weatherproofed #24 Thread									1	1
Wagon		1								
Whistles, Spalding #7361 or its equivalent					1	1	1	1	1	1
Ball Inflater, Spalding #7321 or its equivalent		1 per school								
Measuring Tape, 50' steel		1 per school								
Stop Watch-Timer, Lowe and Campbell #8210 or its equivalent		1-3 per school								
*										
Creative & Expressive Activities										
Painting										
Brushes, 5/8'' width	doz.	1	1	1	1	1	1	1	1	1
Brushes, 1/4'' width	doz.			1	1	1	1	1	1	1
Paints, poster	gal.	6	3	3	3	3	3	3	1	1
Wheat paste, 5# to a pkg.		2	2	2	1	1	1	1	1	1
Sponges, cellulose	6	6	6	6	6	6	6	6	1	1
Aprons		30	32	10	10					
Brushes, 2'' width	doz.	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3

---

*For farther details, see Guidebook, "GROWTH THROUGH PHYSICAL EDUCATION", pages c-6 and c-7.

Item		Kdgtn.	1	2	3	4	5	6	7	8
Brushes, flat bristles, 1'' width	doz.	1	1	1	1	1	1	1	1	1
Paper, manila wrap, 36'' width	roll	1	1	1	1	1	1	1	1	1
Easels, double		2	2	2	2	2	2	2	1	1
Dryer for painting		1								
Clay Activities										
Clay, ceramatex, 50# to a ctn.		1	1	1	1	1	1	1	1	1
Oilcloth	yd.	6	6	6	6	6	6	6	1	1
Clay container, with cover		1	1	1	1	1	1	1	1	1
Drawing, Cutting and Pasting										
Chalk, assorted colors	box	1	1	1	1	1	1	1	1	1
Crayons	box	12	32	32	32	32	32	32	1	1
Paper, colored com										
Paper, colored construction & tonal, 9x12 (100 sheets)	pkg.		12	12	12	12	12	12	1	1
Paper, colored construction & tonal, 12x18 (100 sheets)	pkg.	6	6	6	6	6	6	6	6	6
Paper, manila drawing, 9 x 12	rm.	1	2	2	2	4	4	4	6	6
Paper, newsprint unlined 24 x 36	rm.	2	2	2	2	1	1	1	1	1
Paste, qt. jar		1	3	3	3	2	2	2	2	2
Tape, masking, 1/2'' wide	roll	2	2	2	2	2	2	2	2	2
Charcoals and pastels	box					2	2	2	2	2
Scissors, 4-1/2'' pointed	doz.	2	3	3	3	3	3	3	3	3
Woodworking										
Nails	lb.	2								

Item		Kdgtn.	1	2	3	4	5	6	7	8
Sandpaper	shts.	24								
Paint thinner	gal.	1								
Oil, for oiling wheel toys and tools	can	1								
Glue, quick-setting	pt.	1								
Paints, enamel, asstd. colors	qt.	4	1	1	1	1	1	1	1	1
Enamel brushes		4	4	4	4	4	4	4	4	4
Saws		2								
Brace and Bit	set	1								
Claw Hammers, 7 oz. & 13 oz.		4								
Screwdriver		1								
Workbenches or Sawing Benches		2								
"C" Clamps		2								
Music and Rhythmic Activities										
Records, phonograph		6	6	6	6	6	6	6	6	6
Radio						1	1	1	1	1
Phonograph		1	1	1	1	1 per 2 classroom				
Rhythm band sets		1	1	1	1					
Health and safety -- First Aid										
Adhesive -- tri-wide		School to estimate amount needed								
Applicators		" " " " "								
Aromatic Spirits of Ammonia (ampule type suggested)		" " " " "								

Item	Kdgtn.	1	2	3	4	5	6	7	8
Band Aids	"	"	"			"	"		
Bandage -- 1", 2", and 3"	"	"	"			"	"		
Baking Soda	"	"	"			"	"		
Chart for Communicable Disease Control	1 per school								
Cotton -- lb. size	School to estimate amount needed								
Green Soap	"	"	"			"	"		
Instructions for First Aid	1 per school								
Steri-pads -- 3 x 3	School to estimate amount needed								
Steri Gauze -- 5 yard lengths	"	"	"			"	"		
Thermometer	3 per school								
Tongue Blades	School to estimate amount needed								
Triangle	"	"	"			"	"		
Scissors	2 pr. per school								
Sterile Jars for Cotton and Applicators and Sterile Pads	3 per school								
Tweezers	2 per school								

CHART STAND

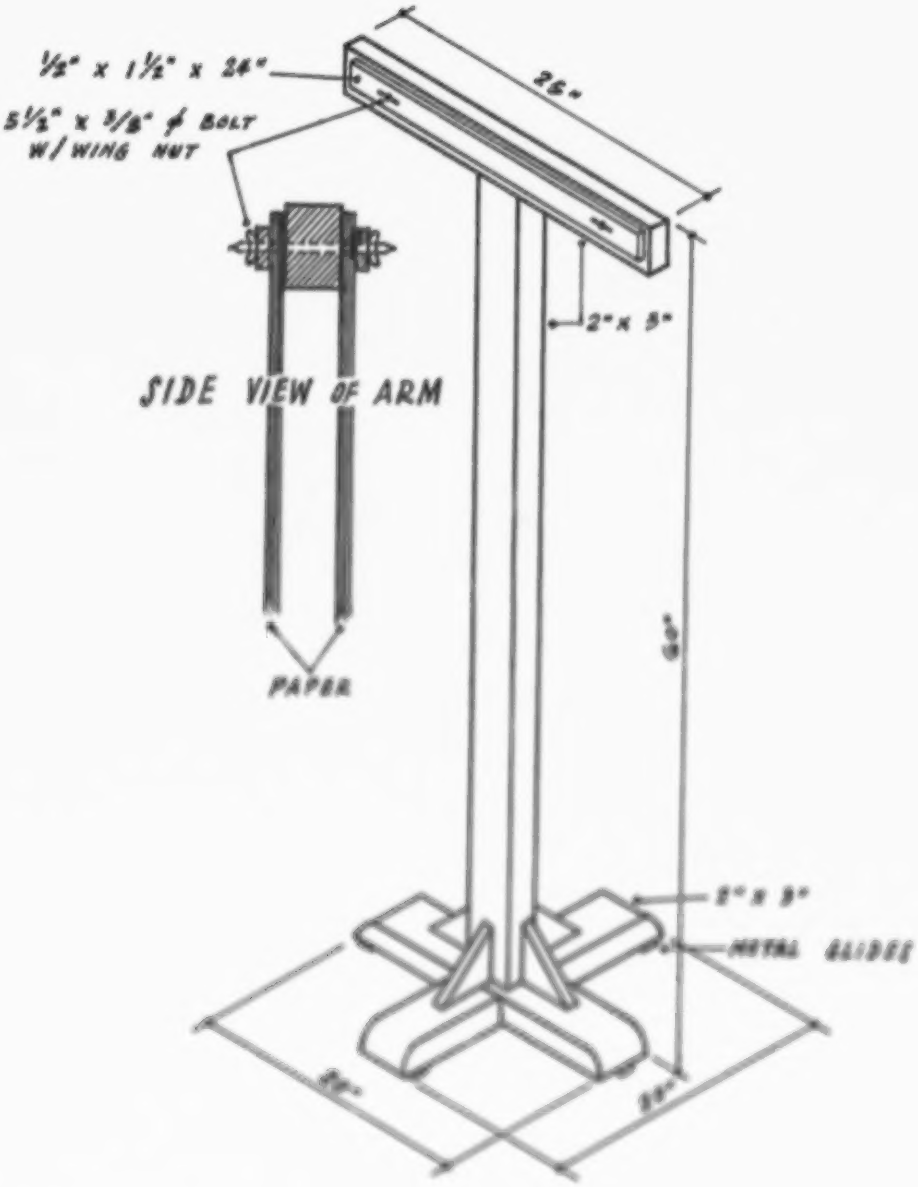

1/2" x 1 1/2" x 24"
5 1/2" x 3/8" ϕ BOLT
W/ WING NUT
26"
2" x 5"
SIDE VIEW OF ARM
PAPER
60"
2" x 3"
METAL GLIDES
20"
20"

Figure #1 **Scale 3/4" 1' -0"**

EASEL

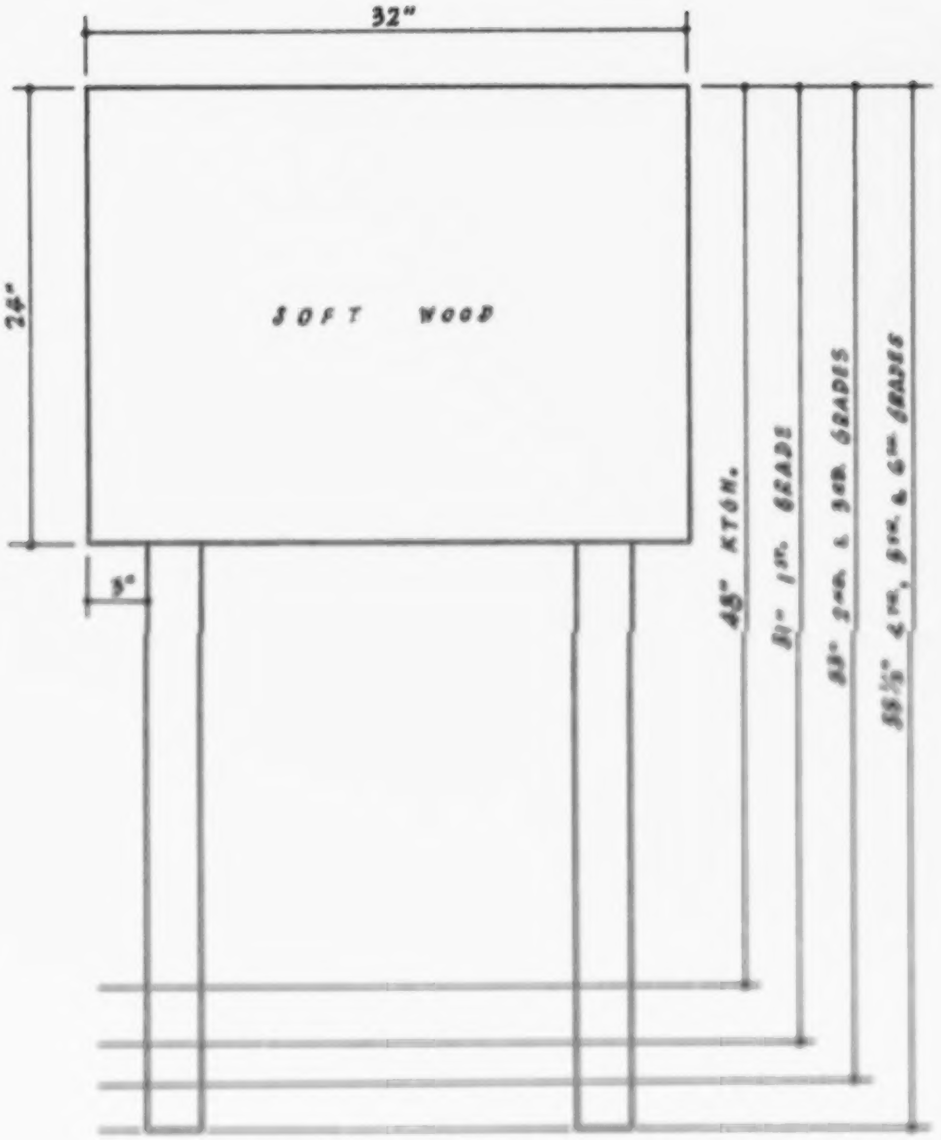

32"
24"
SOFT WOOD
3"
48" KTGN.
51" 1ST. GRADE
53" 2ND. & 3RD. GRADES
55½" 4TH, 5TH, & 6TH GRADES

Figure #2 Scale 1" 1'-0"

PHONOGRAPH RECORD CABINET

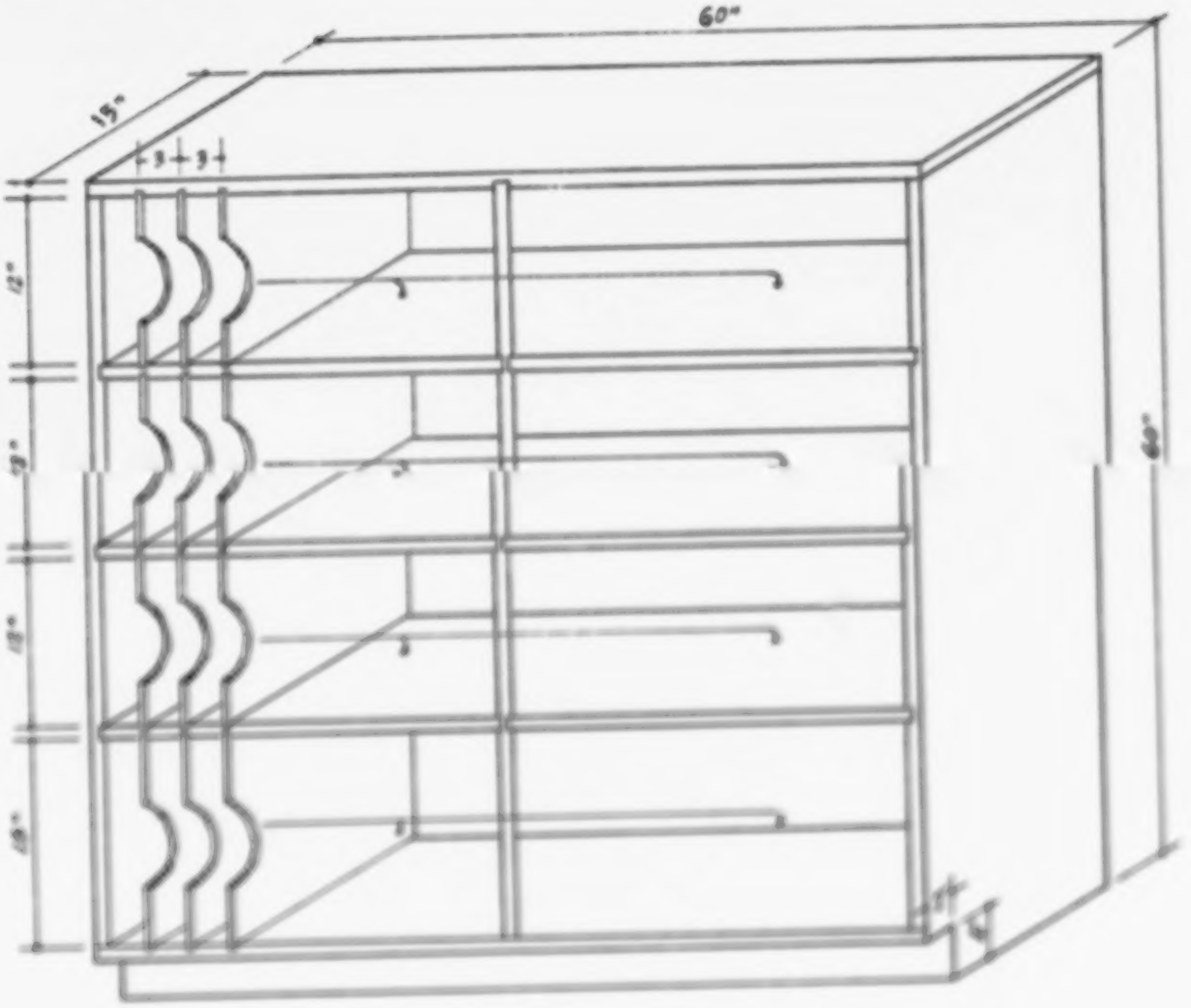

60"
15"
3
3
12"
12"
60"

Figure #3

Scale 3/4" 1'-0"

DEMONSTRATION TABLE

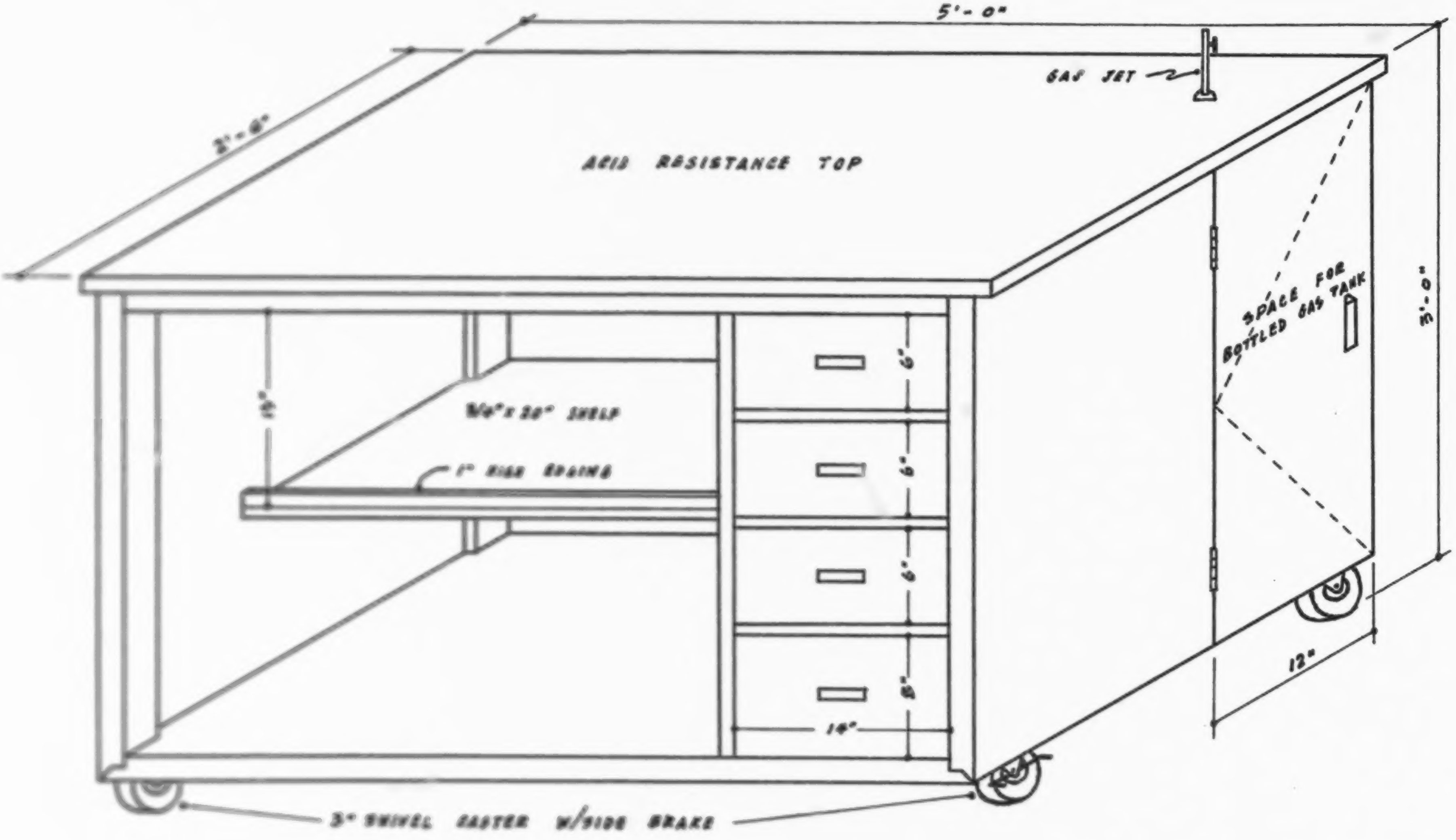

5'- 0"
2'- 6"
3'- 0"
GAS JET
ACID RESISTANCE TOP
SPACE FOR BOTTLED GAS TANK
15"
3/4"x 28" SHELF
1" HIGH EDGING
6"
6"
6"
8"
14"
12"
3" SWIVEL CASTER W/SIDE BRAKE

Figure #4

Scale 1" 1' -0"

MOVABLE LABORATORY TRUCK

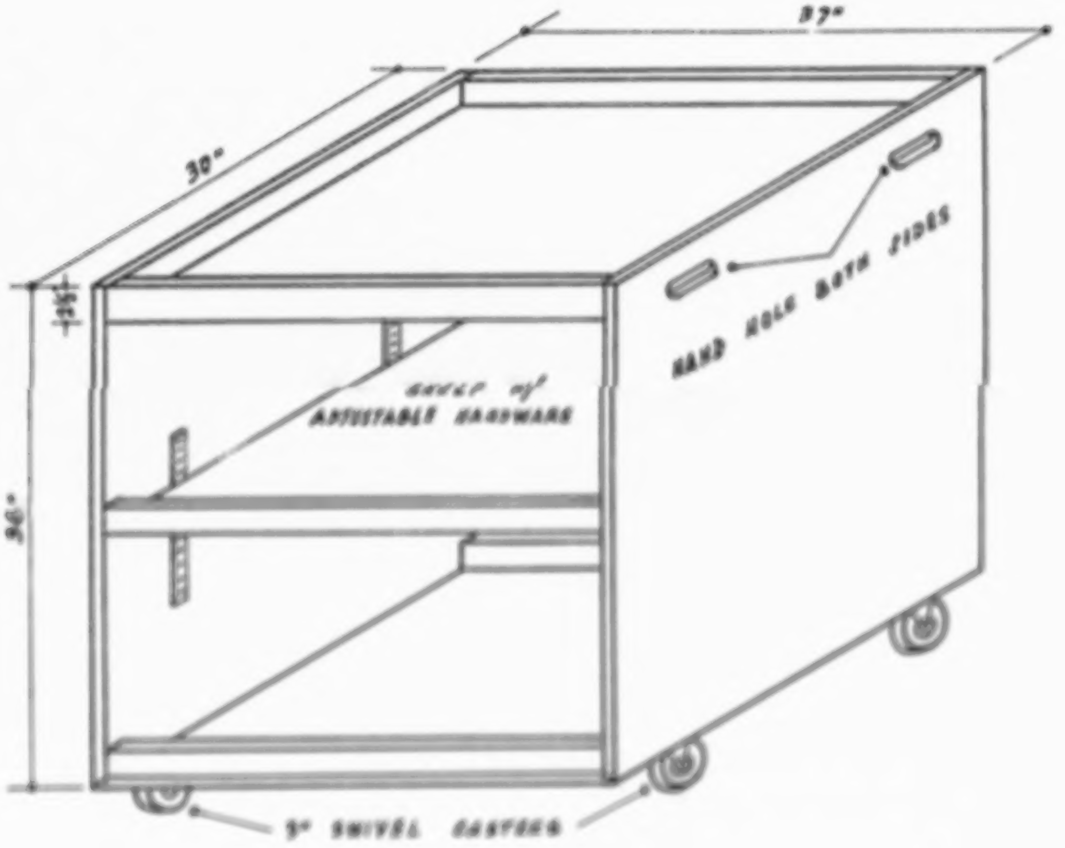
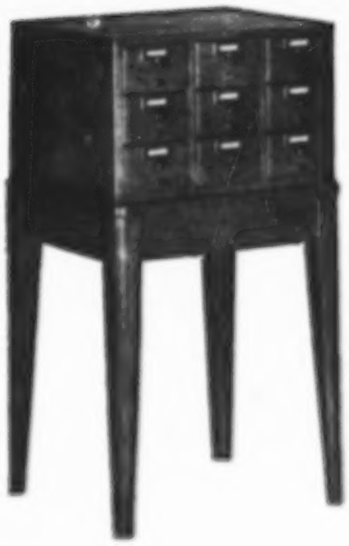

37"
30"
3½"
36"
SHELF W/ ADJUSTABLE HARDWARE
HAND HOLE BOTH SIDES
3" SWIVEL CASTERS

Figure #5 Scale 3/4" 1'-0"

CARD CATALOG CABINET (Workroom)



9-tray Catalog Case used with the Table Base.

Figure #6

RING PULL

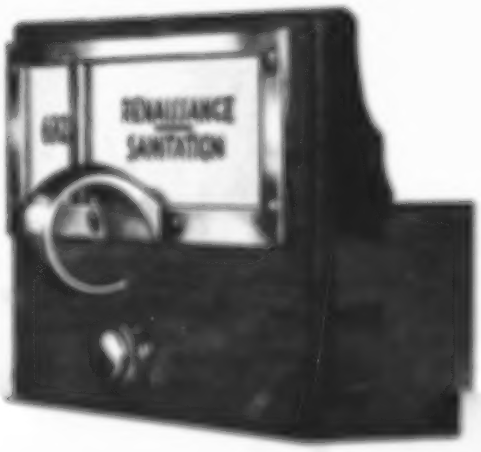
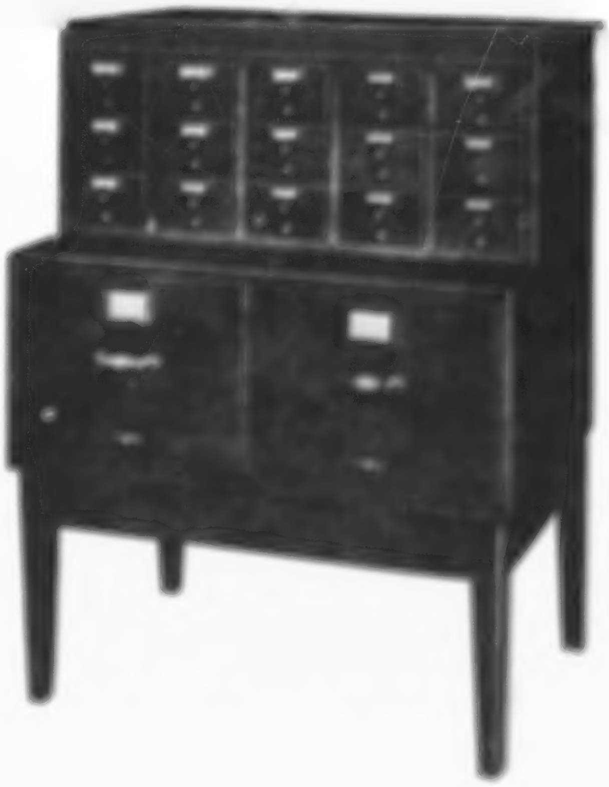


Figure #7

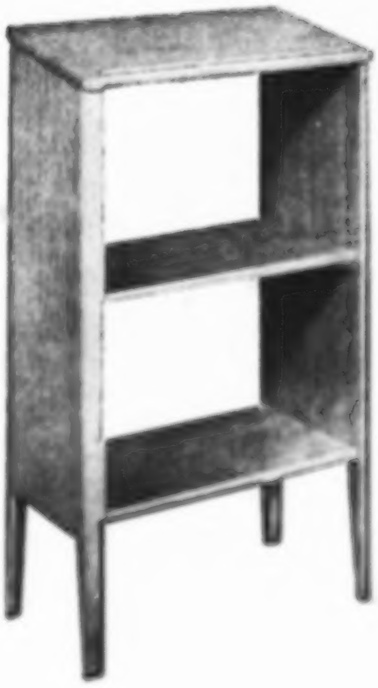
CARD CATALOG CABINET



44-1/2" high x 33" wide x 24" deep, combines a 17" depth card catalog cabinet with a 24" depth 2-drawer legal size unit, drawer 15-1/4" wide x 10-1/2" high inside.

Figure #8

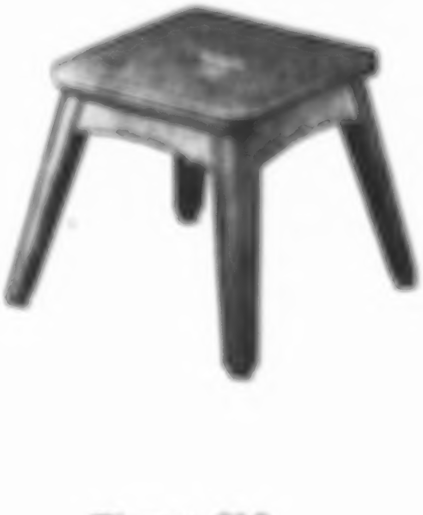
DICTIONARY STAND



41'' high at the front, 43-1/2'' high at back, 24'' wide and 14-1/4'' deep on the slope of the top. Intermediate shelf is adjustable and 21'' wide in the clear by 12-5/8'' deep.

Figure #9

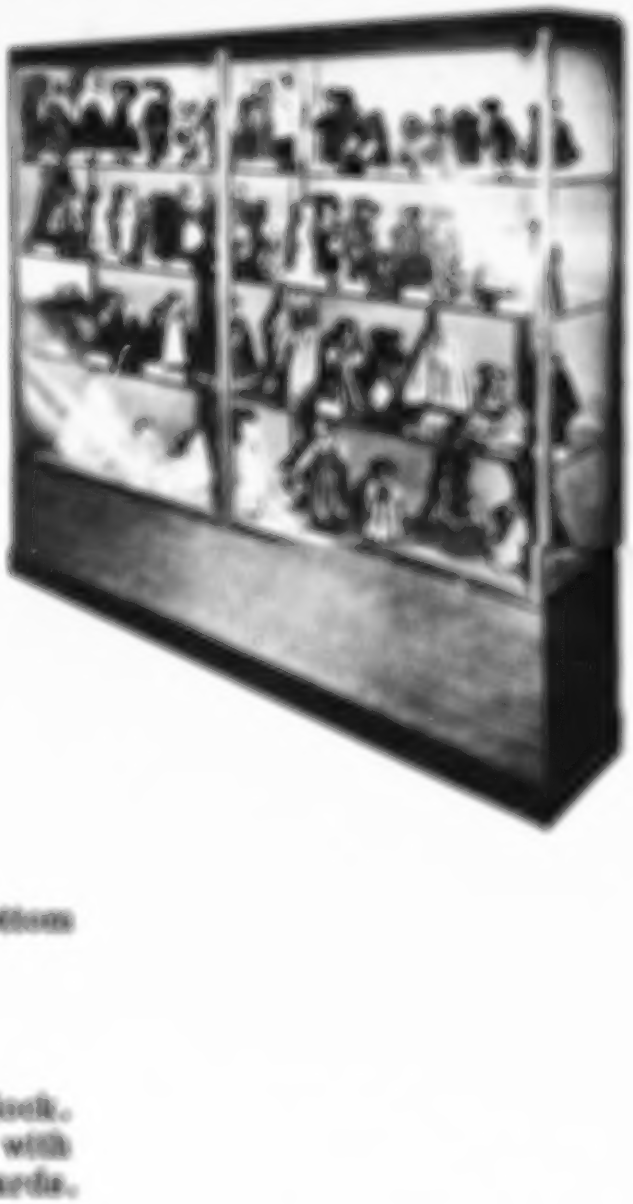
STOOL



12'' x 12'' top, and 12'' high with a hand hold for convenience in carrying.

Figure #10

DISPLAY CABINET

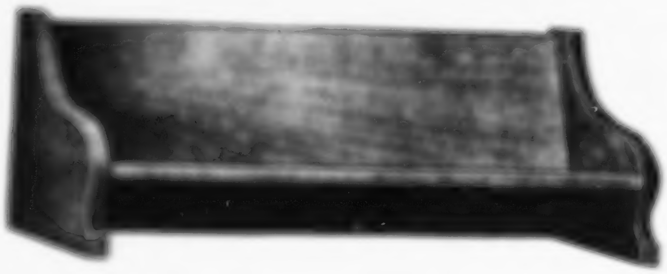


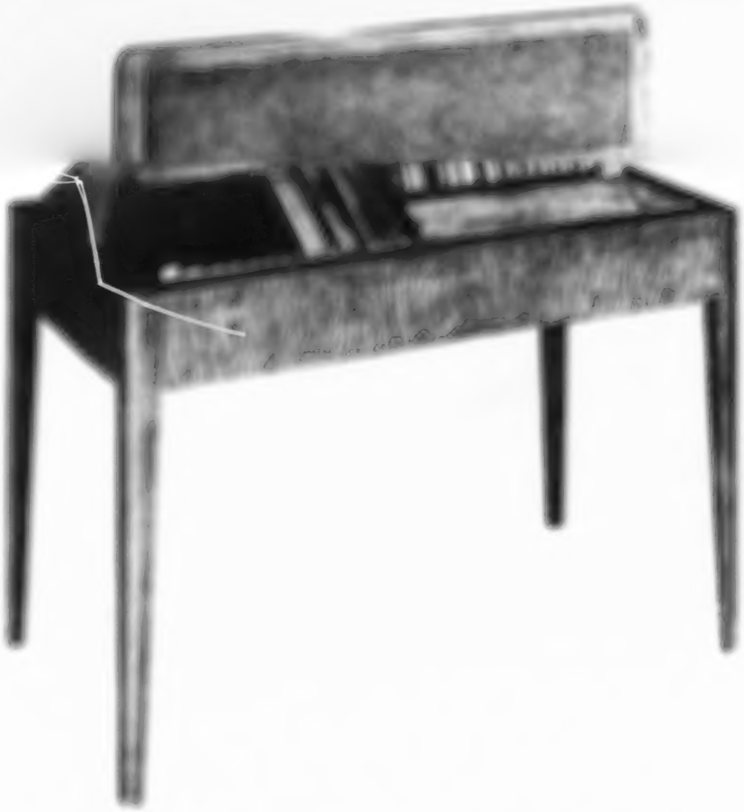
Elementary

Three-dimensional display
1. Built in recessed area
   Approximate size:
      3' from floor (to bottom
         of display area)
      4' wide
      4' high
      1-1/2' deep
   Glass front door with lock.
   Glass & wooden shelves with
      adjustable shelf standards.
   Tackable back and ceiling.
   Electric outlet at bottom.
   Indirect lighting desirable.
   Provision for ventilation.

Figure #11

BOOK DISPLAY CASE





24" long, 10-3/4" deep. (Small)

Figure #12

33" high, 42" wide, 24" deep

CHARGING DESK

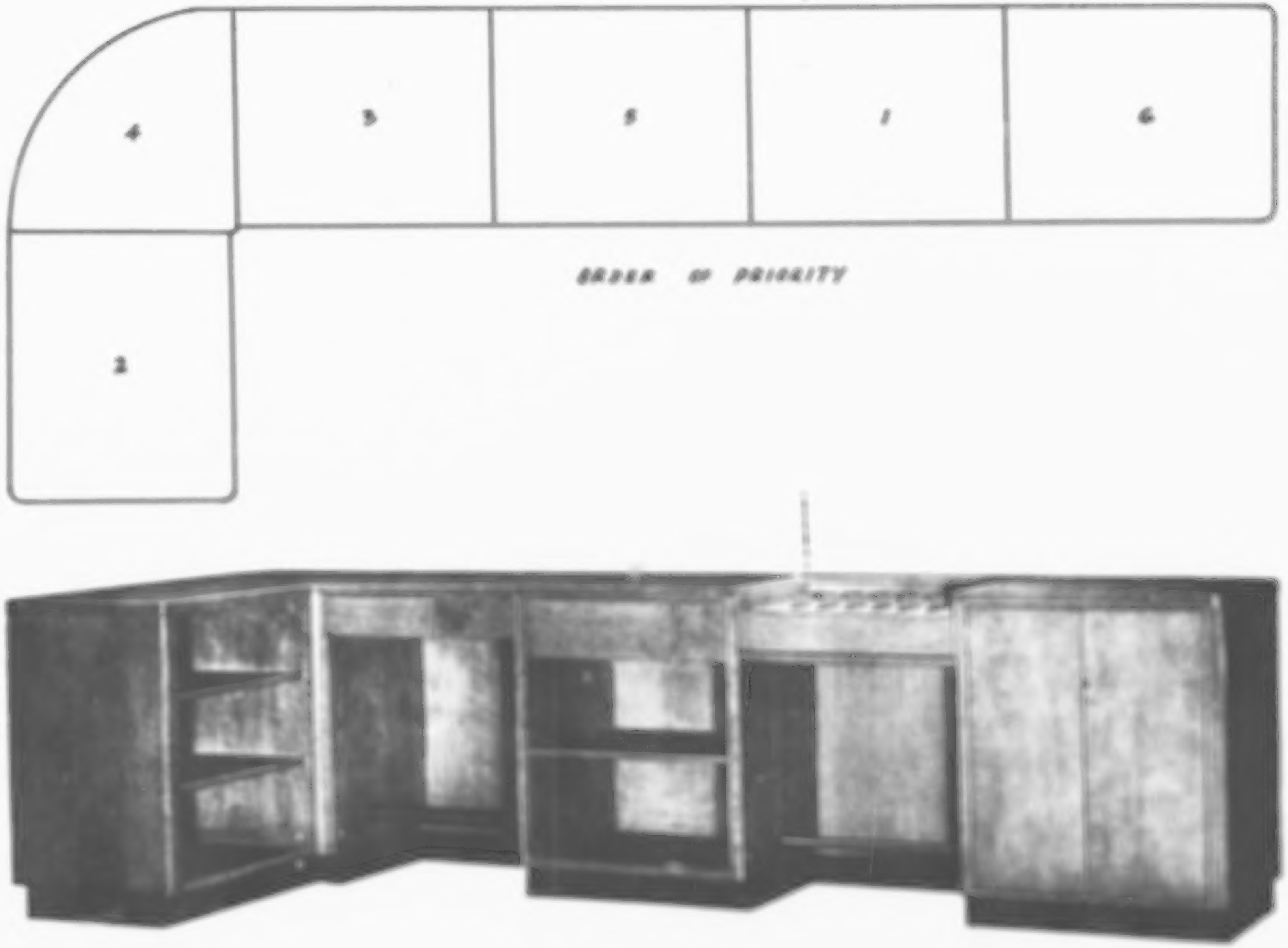
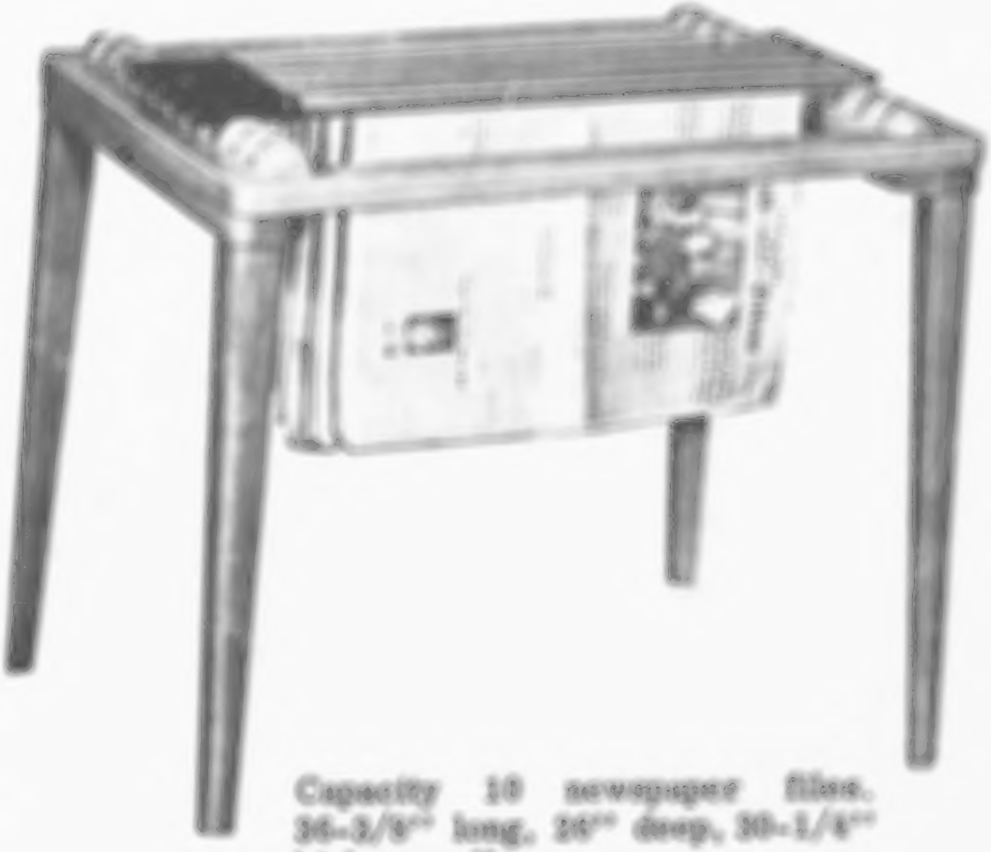

4
3
5
1
6
2
ORDER OF PRIORITY

Figure #13

Figure #14

NEWSPAPER RACK



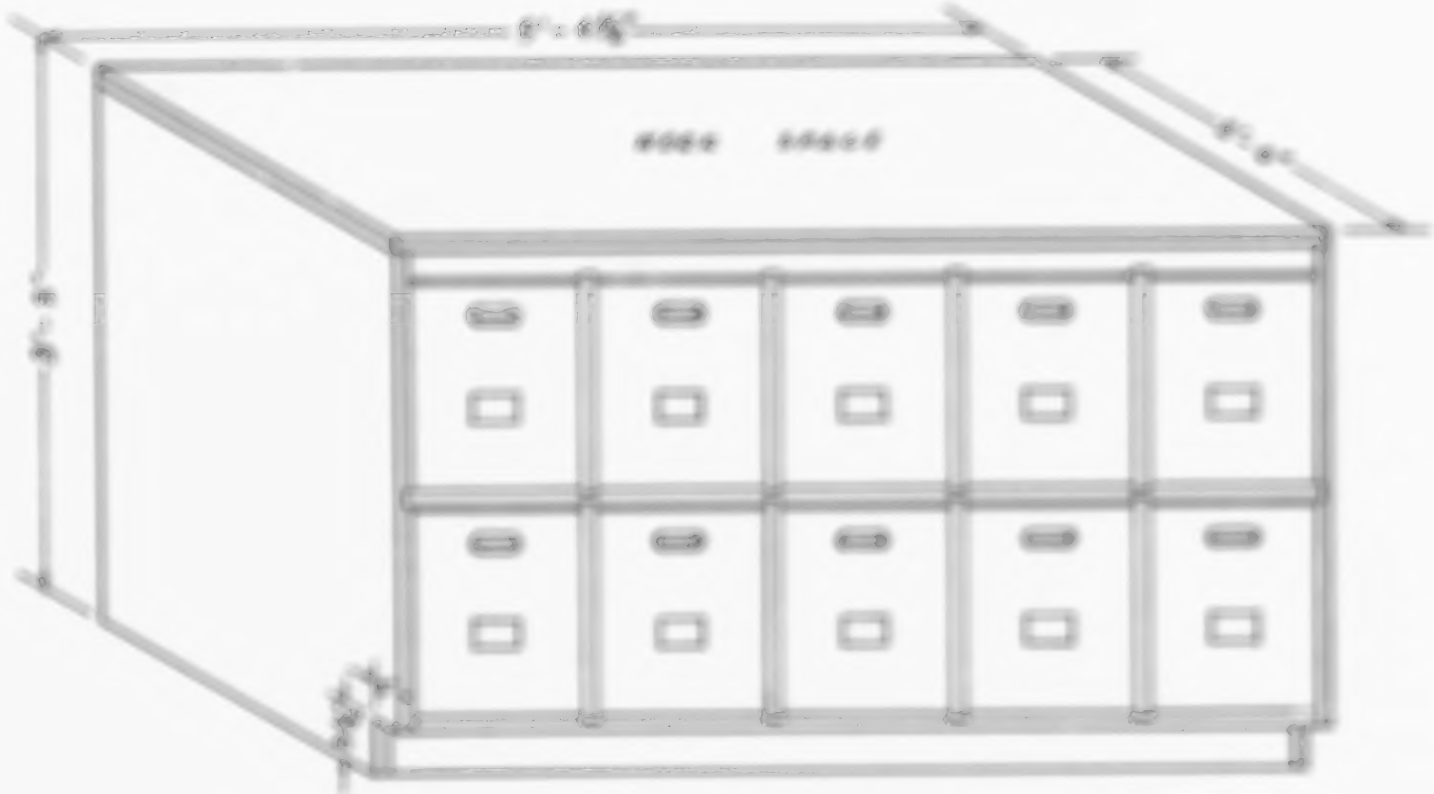
Capacity 10 newspaper files. 36-3/8" long, 26" deep, 30-1/4" high overall.

MAGAZINE RACK

6' range consisting of one initial section (including ends) plus one additional section.

Figure #15

STORAGE CABINET



SCIENCE BOX

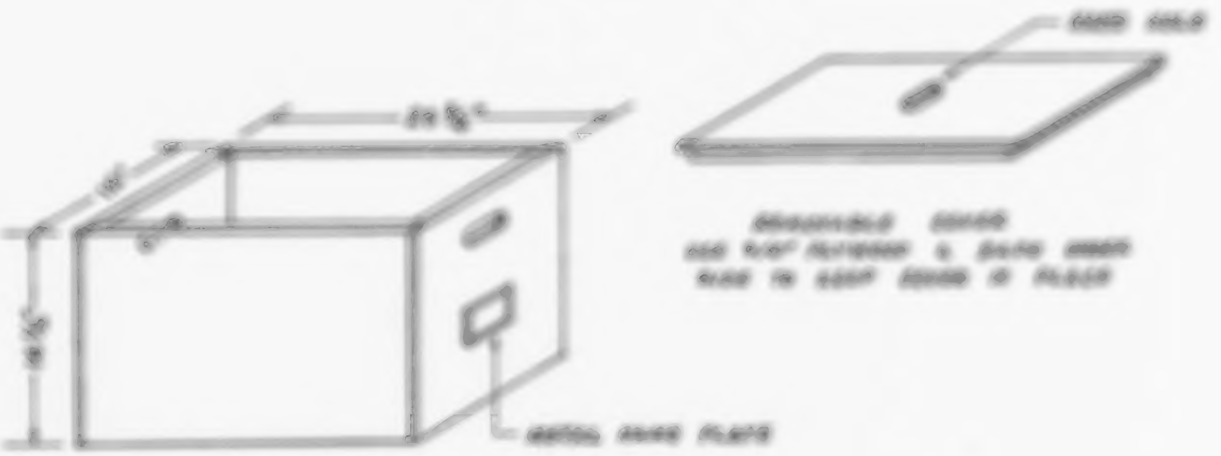

HAND HOLE
REMOVABLE COVER
METAL NAME PLATE

Figure #16

Scale 3/4" 1'-0"

PART III

STANDARDS

A. SCHOOL SITES

B. SCHOOL BUILDINGS

C. OUTDOOR AREAS

1320

PART III
ELEMENTARY SCHOOL STANDARDS

The Standards set forth are in keeping with the Policy Statement contained in this volume and should be maintained. However, local circumstances may make it necessary at times, to deviate from these standards.

A. School Sites — size

At no time should acreage of usable land area be less than the minimum given below, unless approved by the Superintendent of Public Instruction.

Acreage of Usable Area

Buildings	Enrollment	Minimum (Acres)
One-story units	800	8.0*

Only when it is economically impractical to build one-story units, two-story units may be planned on a minimum of 6.0 acres for an enrollment of 800.

*At least five (5) acres should be acquired when a proposed elementary school adjoins a county playground.

B. School Buildings

Computation of Building Areas

Exterior walls and partitions between classrooms, offices, etc. are included in computing the area of the classroom and auxiliary facilities. Additional 8-foot covered walkways connect classroom wings and other building facilities.

	Sq. Ft.
Kindergarten Classrooms (One-story unit) (including sink and counter, movable shelves, storage, tots' lockers, teacher's desk, and mop sink)	1040
Kindergarten Patio	200
" Storage	80
" Tots' Toilets	80

Elementary Classrooms

With Work-lanai (classroom area)	840
Work-lanai (including 80 sq. ft. for toilets for grade 1)	320
Work-lanai (Without toilets), Grades 2-6	240

Without work-bench (Classroom area)	960
Walkway Area (including 60 sq. ft. for toilets for grade 1)	320
Walkway Area (Exclusive of toilets), Grades 2-6	240

Multi-Purpose Classroom

Classroom: 2-1/2 times 960 sq. ft.	2,400
Portable Stage: Area included in over-all area of classroom	

CAFETERIA

1. Space requirements: (sq. ft.)

Enrollment	Kitchen	Storeroom	Dining Room	Serving Area
300	600	150	1,200	8' wide x length of kitchen
500	750	187	2,000	
600	900	240	3,000	
1,000	1,150	287	4,000	

2. Additional areas needed regardless of size of cafeteria: (sq. ft.)

Managers Office	60
Laundry	60
Toilets	70
Refuse and Can Washing Room	60
Interior Circulation	120
Helpers' Locker Room	64
Heater Room	64
Compressor Room	32

3. Cafeterias with an enrollment of 600 or more: (sq. ft.)

Dishwashing Room	200
Walk-in Chill Room	64
Walk-in Freezer (Only when specified)	35

LIBRARY

FLOOR SPACE REQUIREMENT

Enrollment	500	800	1,000
	sq. ft.	sq. ft.	sq. ft.
Office Area	100	110	120
Stackroom for Textbooks	650	675	900
Storage Room	75	110	120
Workroom (Include A-V Storage)	120	160	250
Circulation and Reading Room	25 sq. ft. per reader. Number of readers to be seated at one time: Up to 1,000 enrollment -- largest class (35) plus 10. (1125 sq. ft.)		

ADMINISTRATION

FLOOR SPACE REQUIREMENT

No. of Non-Teaching Staff (Based on 175-1 ratio)	1	2	3	4	5
Area Required					
General Office (Sec'y.)	300	300	300	360	360
Principal's Office	120	120	120	144	144
Vice-Principal's Office	--	--	--	120	120
Storage Room	120	120	120	180	200
Toilets	100	100	100	100	100
Lobby	80	80	80	120	120
Mimeograph Room or Alcove	--	--	120	120	120
Health Center	225	225	225	225	400
J.P.O. Room	64	64	64	64	64
Vault	--	--	--	--	60
Conference Room	--	--	150	215	256
Counselor's Interview Room	--	100	100	100	100
Size of School	175--349	350--524	525--699	700--874	875--1049
No. of Teachers	1-11	11-16	16-22	22-27	27-32
Area (sq. ft.)	1009	1109	1379	1773	2068

Note: Other areas will be included when D.P.I. requirements are increased.

Other Building Facilities (Based on 800 pupil enrollment)

1. Boys' and Girls' Toilets

   Individual classroom toilets for Grades K-1.
   One group toilet for not more than six (6) classroom---Grades 2-6.

2. Teachers' Restrooms

   Separate single-stall restrooms for every 8 classrooms.
   One lobby-type restroom for entire new plant -- 300 sq. ft.

3. Teachers' Workroom

   300 sq. ft. See specs, Pages 46-47.

4. Custodians' Service Sinks and Storage

   These facilities should be planned in conjunction with student toilets. The number and location of these will depend upon the size and layout of the school plant.

5. Custodians' Storage and Toilet -- 300 sq. ft.

6. General Storage -- 300 sq. ft.

   The location of the general storage area should be planned according to the layout of the new plant.

7. Transformer Vault and Switch Room -- 270 sq. ft.

   The location of this unit should be planned according to layout of the new plant.

8. Incinerator

   The location of the incinerator should be planned according to the layout of the new plant.

Building, Fire, and Sanitary Regulations

Existing Territorial and County laws, regulations, and codes shall govern the planning of all new school plants in matters pertaining to construction, fire and safety, and sanitation.

HEIGHTS FOR SCHOOL EQUIPMENT
(Heights in inches)

Grade	Chalk-rail	Counter and/or sink	Top of Mirror	Drinking Fountain	Wash Basin	Classroom Windows	Toilets Water Closet	Toilets Urinal (trough)
Kdgtn.	22	22	45	22	22	30	13	16
1	24	24	48	24	24	30	13	16
2	24	24	48	24	24	30	13	16
3	24	24	48	24	24	30	13	16
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C. Outdoor Play Areas

Facilities Required to Accommodate the Program of Activities

Outdoor areas

Separate Elementary School (Grades K-6)

Enrollment: 600 Total Area Required for P.E.: 137,500 sq. ft.
Classes: 25 (3.1 acres)

Kindergarten

Area required: 7,500 sq. ft.

Grassed: 2,500 sq. ft. (50' x 50')
Grassed: for building boxes and ladders: 1,000 sq. ft. (25'x40')
Paved: 2,000 sq. ft. (30' x 65')
Apparatus: 2,000 sq. ft. (30' x 65')

Grades 1, 2, 3:

Area required: 34,000 sq. ft.

Grassed: 25,000 sq. ft. (250' x 100')
Paved: 5,000 sq. ft. (50' x 100')
Apparatus: 4,000 sq. ft. (50' x 80')

Grades 4, 5, 6:

Area required: 96,000 sq. ft.

Grassed: 80,000 sq. ft.
(Softball, etc.: 40,000 sq. ft. - 200 x 200)
(Football, etc.: 40,000 sq. ft. - 250 x 150)

Paved: 10,000 sq. ft. - (150 x 65)
(2 Basketball courts - 40 x 60)
(1 All-purpose area)

Apparatus: 6,000 (50 x 120)

Grades 4 - 8: (If elementary school includes grades 7 & 8, substitute the following for the preceding section, Grades 4, 5, 6.)

Area required: 147,050 sq. ft.

Grassed: 130,000 sq. ft.
(Softball, etc.: 40,000 sq. ft.: 200' x 200')
(Football, etc.: 90,000 sq. ft.: 300' x 300')

Paved: 11,050 sq. ft. (130' x 85')
(2 Basketball Courts: 44' x 80')
(2 Volleyball " : superimposed 30' x 60')
(2 Basketball " : superimposed 40' x 60')
(2 Volleyball " : superimposed 25' x 60')

Apparatus: 6,000 sq. ft. (50' x 120')

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